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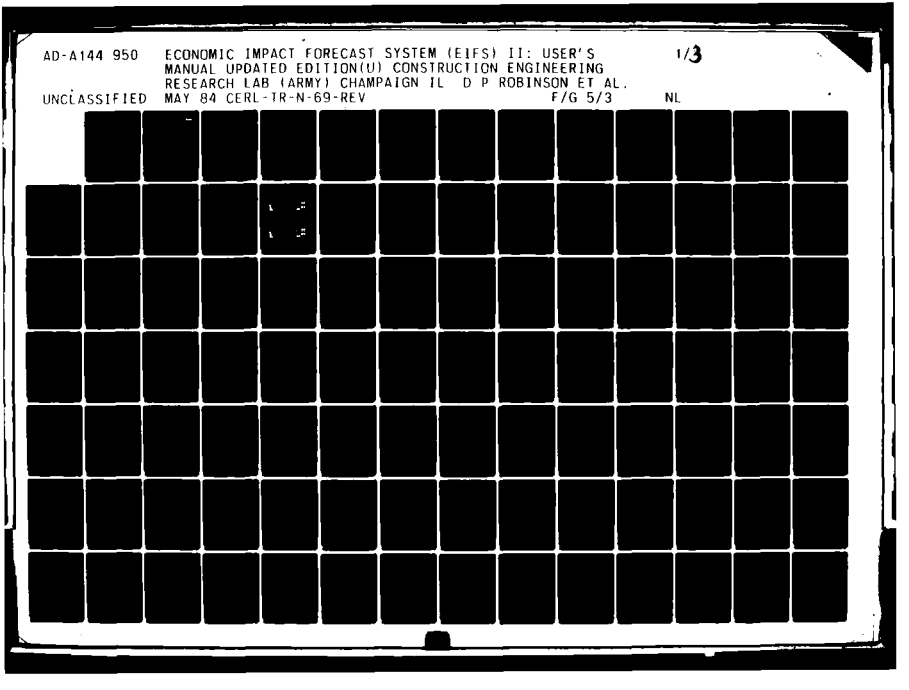
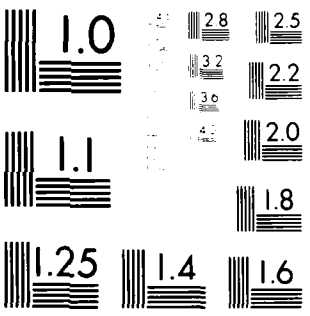
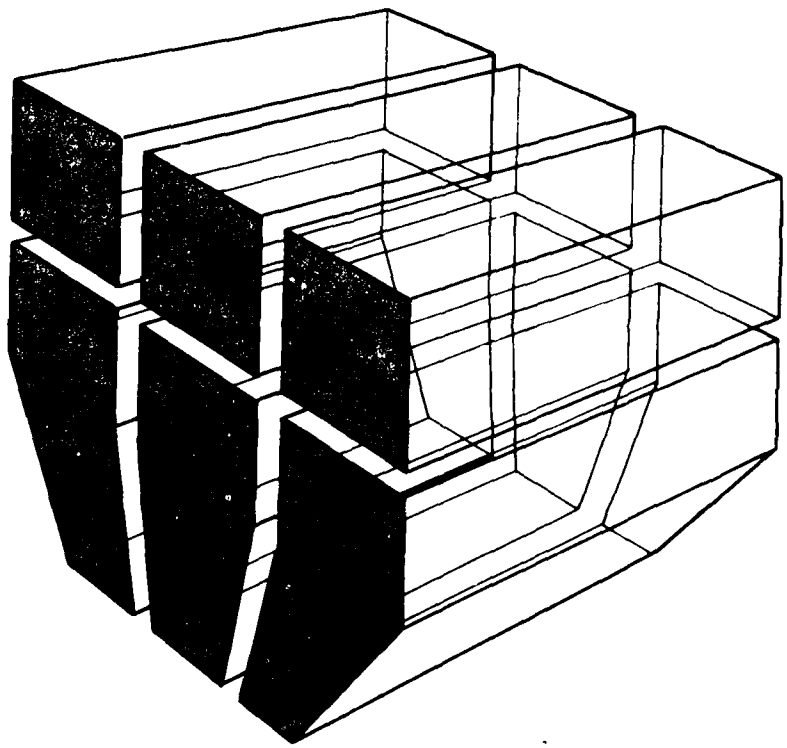




US Army Corps
of Engineers
Construction Engineering
Research Laboratory

TECHNICAL REPORT N-69 (REVISED)
May 1984

ECONOMIC IMPACT FORECAST SYSTEM (EIFS) II: USER'S MANUAL, UPDATED EDITION



by
D. P. Robinson
J. W. Hamilton
R. D. Webster
M. J. Olson

NOTICE

This report describes a computer-based system which is in the process of being transferred to an operating agency for production use, training, and maintenance. However, until the process is completed, CERL has been authorized to work with DOD users in extending the field testing of tne system. This arrangement provides for CERL staff assistance to the user on a cost reimbursable basis and on a staff available basis. The details for making such an arrangement are described in the report. When the transfer is completed the operating agency will provide these services.

PAUL J. THEUER, P.E.
Colonel, Corps of Engineers
Commander and Director

FOREWORD

This project was performed for the Directorate of Engineering and Construction, Office of the Chief of Engineers (OCE), under Project 4A762720A896, "Environmental Quality for Construction and Operation of Military Facilities;" Task 01, "Environmental Quality Management for Military Facilities"; Work Unit 002, "Development of Environmental Technical Information System." The work was performed by the Environmental Division (EN), U.S. Army Construction Engineering Research Laboratory (CERL). Mr. V. Gottschalk, DAEN-ECE, was the OCE Technical Monitor.

This research was made possible through the efforts of Department of Defense (DOD) personnel, consultants from the University of Illinois, and scientists and engineers of CERL.

Administrative support and counsel were provided by Dr. R. K. Jain, Chief of CERL-EN. COL Paul J. Theuer is Commander and Director of CERL, and Dr. L. R. Shaffer is Technical Director.

CONTENTS

		Page
	DD FORM 1473	1
	FOREWORD	3
	LIST OF TABLES AND FIGURES	5
1	INTRODUCTION	9
	Background	
	Objective	
	Approach	
	Mode of Technology Transfer	
2	INTRODUCTION TO THE ECONOMIC IMPACT FORECAST SYSTEM	11
3	ORIENTATION	14
4	INTRODUCTION TO INTERACTIVE SYSTEMS	15
	Definition	
	The Terminal	
5	USE OF EIFS	19
	Getting Into EIFS	
	Selecting a Study Area	
	Selecting a Profile	
	The Nature of the EIFS Forecast Models	
	Running the Models	
	Changing Parametric Values	
	Price Deflation in EIFS	
6	SUMMARY	83
	REFERENCES	84
	APPENDIX A: Forecast Model Equations	86
	APPENDIX B: Defining Study Areas	99
	APPENDIX C: County Names	105
	APPENDIX D: Regions for Selected Military Installations	128
	APPENDIX E: 1977 BEA Economic Areas	136
	APPENDIX F: Standard Metropolitan Statistical Areas	171
	APPENDIX G: Deflating Monetary Values	187
	APPENDIX H: Selected Composite Price Indexes	190
	APPENDIX I: Industry Names and Codes Available for CERL-RIMS Analysis	192
	DISTRIBUTION	

TABLES

Number		Page
1	The Effects of Disaggregation	13
2	Location Quotients for a Hypothetical Region	13

FIGURES

1	The Terminal Keyboard	17
2	Special Keyboard Keys	17
3	Example of User Login With UNIX Prompt and System Messages	20
4	Invoking EIFS From ETIS	20
5	Formats for Selecting Counties	22
6	Selecting Editing Features	22
7	Ending Study Area Selection	23
8	Study Area Summary	23
9	Menu of EIFS Profiles	27
10	1980 Census Overview Profile	27
11	1970 Census Overview Profile	30
12	"Valado" Overview Profile	34
13	Short BEA Employment/Income Timeseries Profile	35
14	Detailed BEA Employment/Income Timeseries Profile	36
15	BLS Labor Force Timeseries Profile	38
16	Detailed Employment Profile	39
17	Export Employment Profile	40
18	1977 County Business Patterns Profile	41

FIGURES (Cont'd)

Number		Page
19	Population/Households/Income by Tract/Minor Civil Division Profile	42
20	RTV Profile	43
21	Menu of Experimental Profiles	45
22	CERL-RIMS Profile	46
23	DLA Profile	47
24	CAS Profile	48
25	Review of County List Profile	48
26	Do-It-Yourself Population Pyramids Profile	49
27	AFLECS (Loser) Input Editor Profile	51
28	AFLECS (Gainer) Input Editor Profile	51
29	Description of EIFS 2.5 Versus EIFS 2.3 Profile	52
30	The "Generic" *EIFS Forecast Model*	54
31	Forecast Models Profile	58
32	Construction FA	60
33	Operations and Maintenance FA	63
34	Training FA	66
35	Mission Change FA	68
36	Contractor/Industrial Type Activities FA	71
37	Examine and/or Change Multiplier Profile	74
38	Simple Price Deflation in EIFS	77
39	Construction FA With Simple Price Deflation	78
40	Operations and Maintenance FA With Simple Price Deflation	79
41	Training FA With Simple Price Deflation	80

FIGURES (Cont'd)

Number		Page
42	Mission Change FA With Simple Price Deflation	81
43	Contractor/Industrial Type Activities FA With Simple Price Deflation	82

ECONOMIC IMPACT FORECAST SYSTEM (EIFS) II: USER'S MANUAL, UPDATED EDITION

1 INTRODUCTION

Background

Following the passage of the National Environmental Policy Act (NEPA) in 1969,[1] two orders established that all Federal agencies must assess the environmental impacts of their major programs and actions as well as provide leadership in environmental protection.[2] Because of NEPA's requirement for assessing any impacts on the "quality of human environment," subsequent questions arose regarding whether this mandate extends to the social and economic impacts of programs and actions. Many courts have decided that in preparing Environmental Impact Statements (EISs), adequate assessment of social and economic impacts is as important as assessment of biophysical impacts.

In the past, requirements such as the Case Study Justification Folder (CSJF) documentation for Department of the Army (DA) realignment actions provided for identifying potential economic impacts and considering these impacts in the decision-making process. More recently, Department of Defense (DOD) guidelines have encouraged a uniform approach to socioeconomic impact assessment, so that all DOD agencies may benefit from a systematic approach and uniform documentation. The desire for uniformity stems, in part, from the uniqueness and geographic distribution of DOD installations, their effects on local economies, and the complexity of problems associated with determining the social and economic implications of DOD realignment actions.

To address the need for a systematic approach to socioeconomic impact assessment DA, with substantial cooperation and support from the Department of the Air Force (USAF), has developed the Economic Impact Forecast System (EIFS), which provides information useful for calculating social and economic changes caused by DOD actions.[3] This computer-aided system is designed to be a user-oriented, inexpensive, and systematic approach to meeting NEPA requirements. EIFS points out potentially significant problems early in the

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[1] National Environmental Policy Act of 1970, 83 Stat 852, 42USCS4321, et seq. (January 1970).

[2] Protection and Enhancement of Environmental Quality, Exec. Order 11514, 35 F.R. (March 5, 1970); Prevention, Control and Abatement of Environmental Pollution at Federal Facilities, Exec. Order 11752, 38 F. R. 34793 (December 19, 1973).

[3] R. Webster, R. Mitchell, R. Welsh, E. Shannon, and M. Anderson, The Economic Impact Forecast System: Description and User Instructions, Technical Report N-2/ADA027139 (U.S. Army Construction Engineering Research Laboratory [CERL], 1976); R. Webster, et al., The Rational Threshold Value (RTV) Technique for the Evaluation of Regional Economic Impacts, Special Report N-49/ADA055561 (CERL, 1978).

decision-making process so that alternatives may be considered. If no significant impacts are shown, adequate documentation of these impacts is still available.

Since the development of the original version of EIFS, the approach has been reviewed by members of the scientific community, including some of the nation's leading regional economists. Some modifications to the multiplier and other equations have been implemented to further refine the model. This report presents user instructions for this modified and updated version of the system. Information in this report supersedes information in CERL Technical Reports N-2 and N-69.[4] Many problems identified by users in interpreting Technical Report N-69 and DA Pamphlet 200-2[5] have also been alleviated in this updated report.

Objective

The objective of this report is to provide instructions for using and interpreting output from the updated version of EIFS (EIFS II).

Approach

Experience obtained through assisting field users of EIFs was noted, and a plan for providing a more general user manual for EIFS II (free of limitation to any particular version) was devised. A user's manual was then prepared which meets the necessary criteria and explains in more detail how to use EIFS II in an interactive mode.

Mode of Technology Transfer

It is recommended that the information in this report be used in the revision of Department of the Army Pamphlet 200-2. Concurrent with this revision, it is recommended that existing computer system documentation of the EIFS model be altered to conform to EIFS II.

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[4] J. W. Hamilton and R. D. Webster, Economic Impact Forecast System, Version 2.0: User's Manual, Technical Report N-69/ADA117661 (CERL, 1979).

[5] Economic Impact Forecast System: Description and User Instructions, DA Pamphlet 200-2 (Department of the Army, December 1976).

2 INTRODUCTION TO THE ECONOMIC IMPACT FORECAST SYSTEM

CERL developed EIFS to provide DA users with access to (1) selected Department of Commerce statistics regarding the socioeconomic characteristics of any multicounty area in the United States, and (2) a readily implemented analysis technique for assessing the magnitude and significance of potential socioeconomic impacts on those areas.[6] Although EIFS was initially available for only a limited number of DA facilities, DA and USAF support gave impetus to its expansion to include all areas of the United States. Systematic improvement of the EIFS methodology has provided users with additional capabilities and refinements such as (1) a more realistic export employment multiplier,[7] (2) tract-level socioeconomic data,[8] and (3) the Rational Threshold Value (RTV) technique.[9] Much of the work that constitutes EIFS II is contained in several of the new profiles of EIFS, Version 2.5. Because the format of EIFS II is similar to that used for the original version of EIFS, the acronym EIFS will continue to be used throughout this document.

EIFS acts as both an information source and as an analytical tool. The current database is obtained from a variety of sources: Census of Population, Census of Housing, Census of Manufacturers, Bureau of Economic Analysis (BEA) estimates, County Business Patterns (CBP) reports, and private marketing data firms.

A technique based primarily on the economic export base techniques[10] is used to develop the necessary "multipliers." These multipliers are indicative of the total effect to be gained by adding new personnel or expenditures to a region. EIFS calculates and uses both employment and income multipliers to provide estimates of regional economic impacts.

The present EIFS system has evolved from the two-digit multiplier technique used originally to an improved four-digit multiplier. The original EIFS multipliers were based on the Bureau of Census classification of industries. Since the more aggregated approach would lead to an extreme overstatement of the multiplier, the next step in the EIFS development was to disaggregate the employment data. This was done by using the BEA County Business Patterns

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[6] R. D. Webster, et al., Development of the Environmental Technical Information System, Interim Report E-52/ADA009668 (CERL, 1975); Technical Report N-2.

[7] Andrew Isserman, "Regional Employment Multiplier: A New Approach: Comment," Land Economics (August 1975); R. D. Webster, et al., Development of the Economic Impact Forecast System (EIFS)-The Multiplier Aspects, Technical Report N-35/ADA057936 (CERL, 1977).

[8] R. D. Webster and A. B. Moy, Tract Level Socioeconomic Data Systems for Solid Waste Management at Army Installations, Interim Report N-45/ADA054935 (CERL, 1978).

[9] R. D. Webster, et al., Special Report N-49.

[10] Charles M. Tiebout, The Community Economic Base Study, Supplemental Paper No. 16 (Committee for Economic Development, December 1962).

(CBP) computer tapes, which break employment down into the four-digit Standard Industrial Category (SIC) code.[11] The previous calculations had been done at an approximate two-digit level. This four-digit multiplier should more accurately reflect the actual situation, since the additional detail would be more apt to catch small interindustry transactions. This four-digit multiplier is still an overstatement of the multiplier, although the actual or exact multiplier cannot be scientifically validated. Table 1 shows the effect of disaggregation.

Table 2 indicates the use of the "location quotient" technique for identifying the number of employees producing goods for export and also indicates the simplicity of the multiplier calculation for a very simple four-sector economic region. The actual technique in EIFS, of course, uses between 300 and 800 sectors.

Column 1 of Table 2 gives the percentage of the total national employment that each industry provides, Column 2 provides the total employment in the region for each industry, and Column 3 calculates the percentage of total regional employment that each industry contains. Location quotients are derived by dividing the items in column 3 by those in column 1. A location quotient greater than 1.00 indicates that the region exports those commodities to other regions. Location quotients less than 1.00 imply that the commodities are not produced locally in quantities sufficient to satisfy local needs and therefore must be imported. Finally, location quotients equal to 1.00 indicate that the region neither imports nor exports those commodities.

To find export employment in a basic industry, 1.00 is subtracted from the location quotient, and the answer divided by the original location quotient (Column 5). This answer gives the percentage of employment for the industry involved in export activity. Multiplying the items in column 5 by those in column 2 provides the number of export employees for each industry. The multiplier is the ratio of total regional employment to export employment. In this example, the multiplier is 5, indicating that a $1 increase in export demand would cause a change of $5 in regional income.

The size of the multiplier is directly related to the size of the region, the diversity of its industrial and commercial base, and the size of its population. The greater the population size, the more diverse is the region's economic base, and the more likely that purchased products are manufactured locally rather than imported. Therefore, money injected into the economy is "recycled" more often, causing greater changes in income.

Economic base analysis, with location quotients used as the technique for calculating multipliers, is at the heart of EIFS. CERL scientists believe that the advantages of this technique--reliance on published data sources, incorporation of indirect and direct exports, and the relative minimal cost involved--far outweigh its disadvantages.

Once the total effect is obtained, EIFS distributes the impact to various sectors of the regional economy. Appendix A clarifies the techniques used in EIFS.

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[11] Standard Industrial Classification Manual, 1967 (Executive Office of the President, Bureau of the Budget, 1967).

Table 1

The Effects of Disaggregation
(From Andrew Isserman, "The Location Quotient Approach to Estimating Regional Economic Impacts," AIP Journal [January 1977].)

	Multiplier			
Area	Division Level Data	Two-Digit Level Data	Three-Digit Level Data	Four-Digit Level Data
Georgia	19.01165	6.57299	5.49690	4.84118
Kansas	10.30828	6.51033	4.78054	4.29892
Philadelphia Standard Metropolitan Statistical Area (SMSA)	17.24355	9.10950	6.03754	5.18102
Washington, DC SMSA	3.30660	2.97354	2.81134	2.79792
Fort Monmouth Tri-County, NJ	15.68284	7.17098	5.18690	4.4776
Monmouth County, NJ	7.22016	5.16081	3.88481	3.49575

Employment data sources: County Business Patterns, 1972 augmented by data on government employment obtained from the Bureau of Economic Analysis, U.S. Department of Commerce.

Table 2

Location Quotients for a Hypothetical Region

	1	2	3	4	5	6
Industry or Sector	Percent of National Employment	Regional Employment	Percent of Regional Employment	Location Quotient	LQ-1 ÷ LQ	No. of Export Employees
Services	.40	400	.40	1.00	--	
Durable Goods Manufacturing	.20	75	.075	.375	--	
Nondurable Manufacturing	.10	25	.025	.25	--	
Trade	.30	500	.50	1.667	.40	200
Total		1,000				

$$\text{Multiplier} = \frac{\text{Total Employment}}{\text{Basic Employment}} = \frac{1000}{200} = 5$$

3 ORIENTATION

This report is a tutorial and reference document on the practical uses of EIFS. It addresses the principles of interactive computing, operation of interactive terminals, and use of EIFS software. It does not include technical documentation of the EIFS algorithms, economic models, or databases. The report is designed to be used initially as a step-by-step guide; when the user has become familiar with the system, it may be kept handy as a reference to answer questions.

The contents of the report have been divided into sections covering discrete topics. Where possible, an informal, tutorial approach is used; assumptions of the user's computer expertise are minimized. Instructions are presented both in the text and by numerous examples. New users should read the text and examples and then experiment with the system to gain "hands-on" experience.

EIFS is an evolving system; new features and improvements are continually being added. Most changes affect only the internal functioning of the system and will not affect the operating procedures. Other changes, such as the addition of new profiles, which have a relatively minor impact on users, will be announced and documented by system messages. Version 3 of EIFS will be announced by a new edition of this manual. This current edition describes EIFS II, which has a revised and expanded list of program options.

For example, the user can now create an "alias," which will be recognized by EIFS during subsequent sessions, with an area of study. This means that the user can type in a short name to access an area of study which has a lengthy specification.

The databases have also been updated and more data has been added, including the 1980 census data. The directions which aid the user in making step-by-step decisions (the "help" files), have also been improved. The equations which are used in the mathematical models in EIFS are documented in Appendix A.

Minor changes to this edition will be announced and documented interactively in EIFS, eliminating further duplication of this manual. There are also plans for implementing a complete on-line documentation system. Some features are already documented by the program; typing a question mark will command EIFS to print this information. Eventually, at any point where EIFS expects user input, help will be available from the computer. This document itself will eventually be stored on the computer in such a way that the user can call up any section on the terminal screen.

This report can be used most effectively in a three-ring binder. Sections can then be separated, and future additions (available by interactive retrieval) can be added.

4 INTRODUCTION TO INTERACTIVE SYSTEMS

Definition

EIFS is an interactive or "conversational" system. This means that the user can interact with EIFS to enter data, examine output, and choose program options while an EIFS program is actually running. The term conversational refers to the fact that the computer will type out operating instructions and other information at the user's request; thus, a sort of conversation between the user and EIFS is simulated.

To illustrate the distinction between an interactive system and a non-interactive or batch one, consider the following analogy of buying a pair of shoes by mail out of a catalog, as opposed to buying them in person at a store. Ordering by mail requires filling out an order form, mailing it in, and waiting for delivery. When it arrives, it may or may not be what was ordered. Exchanging it then requires another time-consuming round of the same process, and may still provide an unsatisfactory product. On the other hand, a salesperson in a store will wait on you, help you find what you want, and compute the charge. The entire transaction takes a matter of minutes.

A batch system is analogous to the mail-order company, and an interactive system is analogous to a store. Both types of program accept input or instructions from the user and deliver output or results, but there is a great difference in convenience and effectiveness.

With a batch system, the user prepares all input and submits it as a unit, as in the case of a deck of punched cards; the program responds later, possibly much later, with its entire output. Therefore, the user must know what he/she wants before starting. If the input contains an error, it will not be discovered until much later, possibly after a long, expensive computer run. In addition, many systems require the user to specify several computer factors unrelated to his/her problem, such as how much time the run should take or how many lines of output will be allowed. Running the program may require the user to be versed in the computer system and its jargon, such as operating card punch machines and readers, writing job control instructions, or interpreting error messages. This may require the use of computer consultants, who have little or no understanding of the user's technical requirements.

With an interactive system, the user submits his/her input one step at a time in response to prompting from the computer. Invalid input will be discovered quickly; the output appears quickly, and if it is wrong, the input can be modified. Most interactive systems assume that the user is not trained in computer operations; instead, their instructions are in the language of the field they operate in and do not require that the user provide complex system commands or interpret strange system messages. They further assume that the user is not sure of what is to be done; they provide "menus" or lists of options to choose from, with explanations of what each is, and what must be done to get it. The equipment needed to access an interactive system is little more complicated than a typewriter and a telephone; a user can often keep such a device in his/her own office.

EIFS is a large set of programs and databases (a system), controlled by a master system called UNIX,[12] which has its own programs and databases for normal operations. To distinguish between the two "systems," UNIX is often called the "operating" or "executive" system, while EIFS is an "application" system. Both UNIX and EIFS are interactive; in fact, an interactive application system generally requires an interactive operating system. Most users will not be aware of UNIX; they will see it momentarily when they initiate and end sessions with EIFS. As some users become more familiar with the computer, they may begin to take advantage of some of the many powerful features offered by UNIX. The most important of these are the communication facilities (i.e., the "mail" and "write" commands), which allow users to communicate with each other and with EIFS administrative and maintenance personnel. If problems arise, the user can report them or seek assistance without having to use the telephone or mail.

The Terminal

An EIFS user interacts (provides input and receives output) through an interactive terminal. The terminal most commonly used with EIFS II is the Texas Instruments "Silent 700" series electronic data terminal, usually referred to as "TI." The instructions given in this report are for use with the TI model 745; other terminals operate similarly, as indicated by the manufacturer's instruction book.

The TI resembles an electric typewriter, but contains extra keys, continuous roll paper, and a receptacle for a telephone handset. Once the user has logged in, the terminal (Figure 1) is operated like a typewriter, with a few exceptions. The user indicates the end of a line of input by typing the RETURN key; generally, the computer will not reply until this is done. The RETURN key is often referred to in writing by the symbol <CR>.

On the UNIX computer system, use of lower-case letters is predominant. This convention is followed in EIFS; upper case is almost never used.

In addition to the lower- and upper-case letters and numbers common to typewriters, the terminal has a third set of letters called "control" characters (Figure 2). These letters are typed by depressing the CTRL key while striking a letter key, in the same way that one types a capital letter on a typewriter. The user need not be concerned with any control characters but the control-d and the control-h. Control-d (often referred to in writing by the symbol ↑ D) has special significance; it tells the program that the user is finished, and is also used during logout. Control-h is the backspace key; if a mistake is made when typing a line, the user should backspace over the error and continue with the correct input.

The "at"(@) key performs a related function; it instructs the computer to disregard the entire line just typed and begin again. It is used when

[12] K. Thompson and D. M. Ritchie, UNIX Programmer's Manual, 6th ed. (Bell Telephone Laboratories, Inc., May 1975); Documents for Use with the UNIX Time-Sharing System (Western Electric Company, 1975); Dennis M. Ritchie, C Reference Manual (Bell Telephone Laboratories).

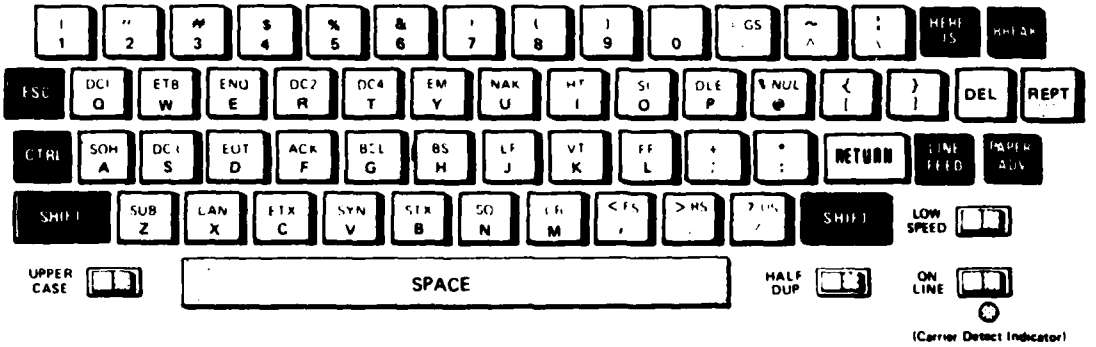

Figure 1. The terminal keyboard. (Material extracted from *Model 745 Portable Data Terminal Operating Instructions*, Manual No. 984024-9701, Rev. A, with permission of publisher. Copyright 1975, Texas Instruments Incorporated.)

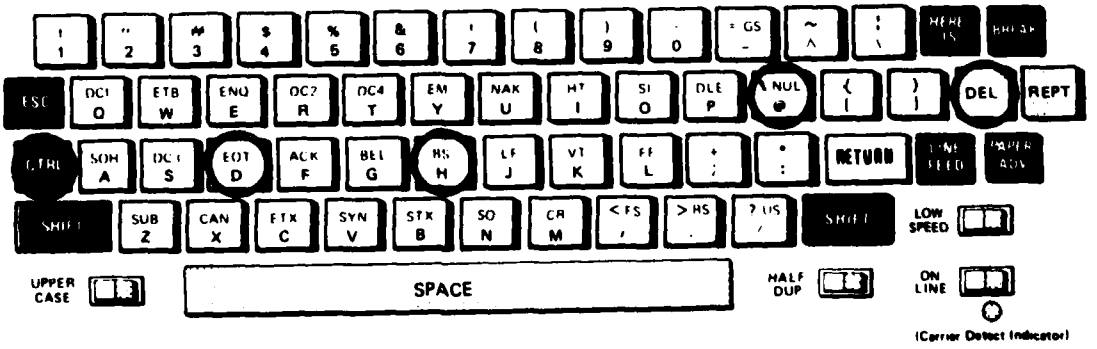

Figure 2. Special keyboard keys. (Material extracted from *Model 745 Portable Data Terminal Operating Instructions*, with permission of Texas Instruments Incorporated.)

back-spacing is inconvenient--for example, when the whole line is incorrect, or when backspacing and overstriking have obscured the line.

The DEL (some terminals label it RUBOUT) key causes the computer to drop what it is doing and attend to the user; it is usually used to abort a lengthy printout or cancel a requested option after EIFS has started to perform it. It is the only control character that does not require the use of another key simultaneously; it is not necessary to follow it with a RETURN.

The following steps should be used to prepare the terminal and connect to EIFS:

1. Set the terminal up in a work area near a telephone

2. Attach the power cord to the terminal and to an electric outlet

3. Turn the power switch on

4. Set the four rocker switches on the keyboard:

   "UPPER CASE" off

   "HALF DUP" off

   "LOW SPEED" off

   "ON LINE" on

5. Dial the UNIX telephone number: (217) 333-1587 or FTS 957-1587

6. Wait for the computer to answer with a steady tone

7. Place the telephone handset in the receptacle.

The terminal will signal a successful connection with a green light near the edge of the keyboard; the computer will display an identifying herald and prompt the user to login.

5 USE OF EIFS

Getting Into EIFS

When a connection has been made, UNIX will reply with a brief identifying message and a prompt for the user's login name. After the user's assigned login name has been typed, the computer will prompt for the matching password. For security, the password will not appear on the terminal printout as it is typed. If the password is typed incorrectly, the computer will print "Login Incorrect" and return to the login prompt. If the user cannot login, he/she should check to see that the login name and password are valid.

After login, the latest UNIX system messages will be printed; most or all of these messages will not concern the EIFS user (Figure 3). Occasionally, they will announce when the computer will be unavailable.

If the last output from the computer is a percent (%) sign, the user is at the "UNIX command level." At this level, all the commands and resources of the UNIX system are at the disposal of the user. It might be instructive for the user to try one or two very simple UNIX commands. For example, entering "date" will result in the time and date being typed out by the computer, and the "who" command results in a list of the users who are currently logged into the system. From this level, the user must first request that UNIX run the program ETIS (Environmental Technical Information System) before EIFS can be invoked. ETIS is a special umbrella or "shell" program which serves as a user receptionist for several systems, including EIFS. Simply type "etis" to run ETIS. (Arrangements can be made so that a user is placed directly in ETIS after signing on, thus eliminating a step in using EIFS. This is often convenient for a beginning EIFS user who is likely to be mainly interested in running only EIFS and not in exploiting any of the other UNIX facilities.)

Upon entering ETIS, a message will welcome the user to ETIS. This message will include directions on how to list the systems available in the ETIS system. The user might be interested in generating this list at least once for information or as an exercise. The list will point out that typing either "4" or "eifs" will invoke EIFS (Figure 4).

Upon entering EIFS, a welcoming message similar to the one from ETIS will be output. Any news regarding EIFS, such as system updates and other changes, will be reported in this message. The system will prompt immediately for the geographic region of interest. The user need not worry about "getting lost" in ETIS or EIFS or making some other costly mistake. These systems are "user proof," and they will lead the user step-by-step through a session.

At the end of an EIFS session, typing control-d will return the user to ETIS; typing control-d once or possibly twice more will result in logging out, as will hanging up the phone. In fact, at any stage of an EIFS session, typing control-d often enough will allow the user first to exit from EIFS and then to log out.

```
U of I Computing Services Office
         Unix System
Login:  hamilton
Password:

12Jan79 sys == da.noncpunix. (misc)
        For Unix help, type     help

        rp5: 2087. Below 1000 indicates /mnt space shortage; act accordingly.
        Machine room (209 ACB) is locked except 8:30-5:00 Mon-Fri.

Tues:  Unix reboot 0800 ... back at 0815.
% etis
Welcome to CERL's

        Environmental Technical Information System

What program?  (Type <cr> to see List):
```

Figure 3. Example of user login with UNIX prompt and system messages.

```
ETIS: What program? (Type <cr> to see list):  eifs

            EIFS version 2.5 has been installed

The new EIFS incorporates many changes; for a description, see profile 97.

Economic Impact Forecast System (version 2.5)

First county or region (type ? for help):
```

Figure 4. Invoking EIFS from ETIS.

Selecting a Study Area

The first step in using EIFS is selecting a study area. A study area consists of one or more counties, and a group as large as 800 counties can be accommodated. In reality, choosing a study area can be a problem, and the final choice will depend on its purpose and use. A review of the issues and several "hints" for defining regions are provided in Appendix B. Counties may be identified by name, by Federal Information Processing Standard (FIPS) code, or by specially defined areas (Figure 5).

To select a county by name, give the name of the county and the name of the state it is in, separated by a comma (for example, "orange, california"). The word "county" is not necessary, but is acceptable. State names can be abbreviated, and EIFS understands several different abbreviations (for example, "ca," "cal," and "calif"). Periods, apostrophes, and spaces that may appear in some names, such as "st. louis," "o'brien," or "de soto," are not necessary, but will be accepted.

To select a county by FIPS code, type the five-digit code number (for example, "06059"). Five digits are necessary, so do not drop any leading zeros.

To select one of the predefined regions (e.g., military installations), type the name of the region (for example, "fort irwin").

If the study area will include an entire state, use the form "counties of .." to select all the counties of a state (for example, "counties of california"). This selection provides the same result as typing the names of each county in the state; later, it will assemble data for each county and add them up to provide state-level data. For some purposes, the database already contains state data. To access this, use the form "state of ..." (for example, "state of california").

If a mistake is made while typing a county, state, or region name, EIFS will offer to print a list of counties, states, or regions. Appendices C through F list predefined regions and their constituent counties.

When selecting a study area, the user may type a question mark (?) to get a brief summary of the available specification formats, an asterisk (*) to get a numbered list of counties selected so far, or a minus sign (-) followed by a number to delete the numbered county from the list (Figure 6). To delete all the counties, type the DEL key to restart the selection process.

After selecting the study area, type RETURN to proceed to the next step (Figure 7). EIFS will display summary population and land area data for each county in the list selected (Figure 8), plus totals for the entire group. If the user does not continue, he/she may type control-d to exit from EIFS.

Selecting a Profile

After selecting the study area, the user will be prompted for the profile of interest; typing RETURN will cause a menu to be printed (Figure 9). Profiles are selected by typing the appropriate profile number.

```
First county or region (type ? for help):  orange, california
First county or region (type ? for help):  06059
First county or region (type ? for help):  fort irwin
First county or region (type ? for help):  counties of california
First county or region (type ? for help):  state of california
```

Figure 5. Formats for selecting counties.

```
First county or region (type ? for help):  ?

You may select individual counties:
by  <countyname>,<statename>   eg:  los angeles, california
by  FIPS code                  eg:  06037

You may select certain regions:
by  <regionname>               eg:  fort benning
by  <smsaname> "smsa"          eg:  chicago smsa
by  "state of" <statename>     eg:  state of illinois
by  "counties of <statename>   eg:  counties of illinois
by  "my" <private regionname>  eg:  my northern illinois

        While you are selecting your study area, you may type:
#       (sharp) to show how many counties you have selected.
*       (asterisk) to show your list of counties so far.
+       to re-select your previous study area
-n      (n = a number) to delete the n-th county from your list.
-all    to delete all counties in your list (to start over).
save    to store your selection as a private region for later recall.
unsave  to delete a previously saved private region definition.
?save,  ?unsave, ?states, ?<statename>, ?regions, ?smsas, or "?my regions"
        for more help.

If you misspell a county, state, or region name, you will be offered a list
of valid spellings.

When you finish selecting your area, type a carriage return.
To leave EIFS, type a control-d.
```

Figure 6. Selecting editing features.

```
First county or region (type ? for help):  houston,al
Next county or region (type RETURN if done):  jackson,fl
Next county or region (type RETURN if done):  geneva,al
Next county or region (type RETURN if done):  walton,fl
Next county or region (type RETURN if done):  bay,fl
Next county or region (type RETURN if done):  gulf,fl
Next county or region (type RETURN if done):  henry,al
Next county or region (type RETURN if done):  dale,al
Next county or region (type RETURN if done):  early,ga
Next county or region (type RETURN if done):  miller,ga
Next county or region (type RETURN if done):  baker,ga
Next county or region (type RETURN if done):  grady,ga
Next county or region (type RETURN if done):  thomas,ga
Next county or region (type RETURN if done):
```

Figure 7. Ending study area selection.

You have selected:

FIPS	County	State	'80 Population	Area (sq mi)
01045	dale	al	47,821	559
01061	geneva	al	24,253	577
01067	henry	al	15,302	554
01069	houston	al	74,632	575
12005	bay	fl	97,740	747
12045	gulf	fl	10,658	565
12063	jackson	fl	39,154	935
12131	walton	fl	21,300	1,053
13007	baker	ga	3,808	355
13099	early	ga	13,158	524
13131	grady	ga	19,845	466
13201	miller	ga	7,038	287
13275	thomas	ga	38,098	541
	Total		412,807	7,738

Figure 8. Study area summary.

The 1980 census profile (#1) (Figure 10) provides a wide variety of statistics from the 1980 censuses of population and housing; e.g., population counts by age, sex, or race; families, households; housing units; and housing values. The 1970 census profile (#2) (Figure 11) contains similar information from the "2nd count" and "4th count" 1970 census of population.

The "valado" overview profile (#3) (Figure 12) includes estimates of employment and income multipliers as well as brief summaries of local business activity and educational data.

The short BEA employment/income time series profile (#4) (Figure 13) provides annual income, employment, and population data for the study area. The detailed BEA employment/income time series profile (#5) (Figure 14) also provides annual income, employment, and population data, but the employment and income are given by "type and broad industrial source."

The BLS labor force timeseries profile (#6) (Figure 15) presents monthly and annual estimates of the local labor force as well as employment and unemployment rates.

The detailed employment profile (#7) (Figure 16) provides estimates of employment by industrial division and by several levels of Standard Industrial Classification (SIC) categories for the year 1972.

The export employment profile (#8) (Figure 17) presents estimates of those industrial workers who produce local goods and services for export. They are derived according to the "location quotient" method.[13] These estimates also form the basis for computing the EIFS export/base employment multiplier.

The 1977 County Business Patterns profile (#9) (Figure 18), like the detailed employment profile (#7), also contains estimates of industrial employment, but for the year 1977. Besides the year, there are two differences between these two profiles (i.e., #7 and #9) that make their employment estimates not completely comparable. First, the detailed employment estimates given in the detailed employment profile (#7) are complete, while the 1977 County Business Patterns profile (#9) provides only ranges of employment estimates for those industrial categories that have "disclosure" problems. Second, the former profile (#7) uses the 1967 SIC sectoring scheme, whereas the latter profile (#9) employs the 1972 SIC categories.

The population/households/income by tract/minor civil division profile (#10) (Figure 19) presents a variety of data at the sub-county level of geography; e.g., population and household counts, income, per capita income, and income distributions. Only a sample of the information available through this profile is shown in Figure 19 (i.e., options 7 and 9).

[13] Andrew Isserman, "The Location Quotient Approach to Estimating Required Economic Impacts," AIP Journal (January 1977).

The RTV profile (#13) (Figure 20) analyzes historic trends in business volume, income, employment, and population to measure the extent of their fluctuations in the past (Figures 20-43 appear at the end of this chapter). The measure of these past fluctuations can, for example, be used as a systematic approach for identifying the significance of economic and social impacts due to military realignment actions or industrial relocations.

The menu of experimental profiles (#98) (Figure 21) provides a list of experimental work being carried out within EIFS. These profiles are either temporary, or may be in preparation for entry into the main EIFS menu. Changes in their operating procedures or their appearance can occur at any time; consequently, their description can only reflect the current "state of affairs" at the time of writing.

The CERL-RIMS profile (#45) (Figure 22) estimates output (or sales), employment, and income multipliers for industrial sectors within the region of interest. The Regional Industrial Multiplier System (RIMS) is a set of procedures that generates input-output (I-O) type industrial multipliers for any county or multi-county area in the United States.[14] That is, they relate changes in regional gross-output, income, and employment to changes in industry-specific final demand for a region. They are used in regional economic impact analysis just like the multipliers from any regional I-O model. A list of valid industrial codes and titles and their Standard Industrial Classification (SIC) equivalent categories are provided in Appendix I (Industry Names and Codes Available for CERL-RIMS Analysis).

The DLA profile (#60) (Figure 23) estimates the regional employment impacts that are likely to occur as a result of contracting activities within the Defense Logistics Agency (DLA). This program correlates relevant information which influences local employment levels, such as geographic location, type of product, technological processes, and existing sales levels, to arrive at a range of possible employment levels appropriate for a particular contract award. The method used to estimate the likely number of employees to be hired because of a contract award or laid off due to a contract rejection is to multiply the estimated contract award by a range of sales per worker ratios, based on the size of firms both within the same industrial classification as the commodity's producer and located in the same geographic area where the commodity is made. Local employment impacts of DLA contracting activities are

[14] R. L. Drake, "Relationship Between Direct and Indirect Components of Input-Output Multipliers" (a paper delivered at the 1974 meetings of the Western Regional Science Association); R. L. Drake, "A Short-Cut to Estimates of Regional Input-Output Multipliers: Methodology and Evaluation," International Regional Science Review (Fall 1976), pp 1-17; and R. L. Burford and J. L. Katz, "On the Estimation of Value Added, Income, and Employment Multipliers Without a Full Input-Output Matrix" (a paper presented at the 1978 meetings of the Southern Economic Association).

estimated using "input-output" type employment multipliers[15] which are unique to the region as well as specific to the industrial category in which the commodity is manufactured.

The Commercial Activities System (CAS) profile (#71) (Figure 24) provides a cost comparison of performing a military activity "in-house" with that of contracting for the service. As shown in Figure 24, the use of this profile is restricted due to the sensitive nature of its data; for further information about the CAS profile, contact Mr. Ronald Webster or Mrs. Susan Odom at CERL, Commercial (217-352-6511).

The "review of your county list profile" (#75) (Figure 25) lists counties that define the current study area.

The "do-it-yourself population pyramids profile" (#78) (Figure 26) provides a way of examining the age distribution of the population in either graphic (i.e., a population pyramid) or tabular form. Options are available to disaggregate population by county, race, or time. Other population pyramid profiles (#88, #89, #90, and #91) are also available, but do not have the flexibility of profile #78.

Several profiles are only accessible with the use of a Ramtek "color-graphics" terminal and, as a result, cannot be shown here. The BEA graphics demo profile (#83) presents employment and earnings by division-level industrial categories graphically in terms of bar and pie charts. The ROI within-state(s) plot profile (#84) shows a map of the study area inset within a map of the state or states that contain the study area. The ROI plot profile (#85) draws a map of the study area and then "color fills" the map for several county-specific data attributes (e.g., employment, income, per capita income, and population).

The AFLECS Input Editor profiles (#86 and #87) (Figures 27 and 28) are access points to the "loser" and "gainer" versions of the Air Force Local Economic Consequences Study (AFLECS) model. AFLECS was developed by the Air Force Engineering and Services Center (AFESC) to analyze Air Force installation realignment actions and base closures. AFLECS is a highly disaggregated socioeconomic model that provides both temporal and geographic detail in its output results. At present, AFLECS requires substantial quantities of community-specific input detail and numerous hand calculations to use. For more information about AFLECS, see the AFLECS user's manual.[16]

The description profile (#97) (Figure 29) reviews several recent changes in EIFS.

---

[15]The industry-specific employment multipliers used for the DLA profile are based on a combination of methodologies developed in Roger L. Burford and Joseph L. Katz, "On the Estimation of Values Added, Income, and Employment Multipliers Without a Full Input-Output Matrix," and Ronald L. Drake, "A Short-Cut to Estimates of Regional Input-Output Multipliers: Methodology and Evaluation."

[16]J. W. Hamilton and R. D. Webster, Local Economic Consequences Study (LECS) Preliminary User Manual, Interim Report N-94/ADA088261 (CERL, 1980).

```
What profile? (<cr> to see list):

Type:     For:
   1      1980 Census overview
   2      1970 Census overview
   3      "valado" overview profile
   4      short BEA employment/income timeseries
   5      detailed BEA employment/income timeseries
   6      BLS labor force timeseries
   7      detailed employment profile (1972 County Business Patterns)
   8      export employment profile (1972 County Business Patterns)
   9      1977 County Business Patterns
  10      population/households/income by tract/minor civil division
  11      to examine and/or change the multiplier(s)
  12      the Forecast Models
  13      rtv (rational threshold value)
  98      menu of experimental profiles
   -      to select a different region
quit      to leave the program

Disaggregated versions of profiles 1, 2, 4, 5, and 6 are obtained by appending
"by county" to the profile number (e.g., "1, by county").
```

Figure 9. Menu of EIFS profiles.

```
What profile? (<cr> to see list):  1

1980 Census Overview

Population Totals
-----------------
Population              412,807
Families                111,658
Households              142,318

Housing Units           159,174

Urban vs Rural
--------------

                          Total       Urban     Non-Rural       Rural
Population              412,807     130,862        96,569     185,376
Housing Units           163,296      50,283        35,533      77,480
```

Figure 10. 1980 census overview profile.

Population

	Total	Male	Female
Total	412,807	201,320	211,487
under 1 year	6,864	3,415	3,449
1 and 2 years	12,775	6,513	6,262
3 and 4 years	12,489	6,308	6,181
5 years	6,467	3,317	3,150
6 years	6,529	3,376	3,153
7 to 9 years	21,423	11,024	10,399
10 to 13 years	27,472	14,205	13,267
14 years	7,301	3,716	3,585
15 years	7,889	4,090	3,799
16 years	8,176	4,225	3,951
17 years	8,122	4,247	3,875
18 years	7,640	3,943	3,697
19 years	7,768	4,063	3,705
20 years	7,508	3,932	3,576
21 years	7,242	3,637	3,607
22 to 24 years	21,906	11,225	10,608
25 to 29 years	32,521	16,310	16,211
30 to 34 years	29,620	14,866	14,765
35 to 44 years	45,763	21,933	23,830
45 to 54 years	41,772	20,076	21,696
55 to 59 years	20,287	9,423	10,864
60 to 61 years	7,728	3,593	4,135
62 to 64 years	10,642	4,815	5,827
62 to 74 years	30,322	13,133	17,189
75 to 84 years	13,144	4,890	8,254
Over 84 years	3,437	1,044	2,393

Race

Total	412,807
White	317,590
Black	89,899
Indian, Eskimo, Aleut	1,521
Indian	1,515
Eskimo	4
Aleut	2
Asian and Pacific Islander	2,127
Japanese	370
Chinese	124
Filipino	357
Korean	367
Asian Indian	112
Vietnamese	680
Hawaiian	69
Guamian	35
Samoan	13
Other	1,670

Figure 10. (Cont'd)

Marital Status

	Total	Male	Female
Total	311,487	149,446	162,041
Single	65,834	37,923	27,911
Now Married	192,405	96,656	96,749
Separated	7,394	2,928	4,466
Widowed	26,678	3,803	22,875
Divorced	19,176	8,136	11,040

Housing

	Total	Occupied	Vacant	Persons
Total	159,175	142,318	15,856	403,074
Owned	102,112	100,083	2,029	285,770
Rented	49,124	42,235	6,889	117,304
Other	7,938		7,938	

Housing Value (Owner-Occupied)

less than $10,000	7,709
$10,000 to $14,999	6,256
$15,000 to $19,999	6,811
$20,000 to $24,999	7,866
$25,000 to $29,999	7,564
$30,000 to $34,999	6,927
$35,000 to $39,999	5,490
$40,000 to $49,999	8,108
$50,000 to $79,999	10,844
$80,000 to $99,999	1,511
$100,000 to $149,999	1,111
$150,000 to $199,999	235
$200,000 or more	173

	Total	Occupied	Vacant
Aggregate Value	$ 2,506,861	$ 2,452,182	$ 54,679 ($000)
Units	72,211	70,605	1,606
Mean Value	$ 34,716	$ 34,731	$ 34,047

Figure 10. (Cont'd)

Contract Rent			
no cash rent		4,261	
less than $50		5,206	
$50 to $99		8,852	
$100 to $119		2,988	
$120 to $139		3,131	
$140 to $149		1,029	
$150 to $159		2,062	
$160 to $169		1,068	
$170 to $199		2,616	
$200 to $249		4,166	
$250 to $299		1,526	
$300 to $399		788	
$400 to $499		111	
$500 or more		30	

	Total	Occupied	Vacant	
Aggregate Rent		$5,831,032	$4,333,769	$1,497,263
Units	40,265	33,573	6,692	
Mean Rent		$ 145	$ 129	$ 224

Source: Bureau of the Census, Census of Population and Housing, 1980

Figure 10. (Cont'd)

```
What profile? (<cr> to see list):  2

1970 Census Overview

CITY COUNTY DATA BOOK
==== ====== ==== ====

Land area:                  7,738 sq mi
Total population:             355,885
Pop density:                    45.99

Business Volume -- 1967

Manufacturing:        $  165,500,000.00
Retail:               $  446,251,000.00
Service:              $   49,389,000.00
Wholesale:            $  335,108,000.00

CENSUS OF BUSINESS, 1972
====== == ========= ====

Dir gen expend:          117,775,000.00
Educational expend:       65,506,000.00
Total assessed value:    696,899,000.00
Assessed to sales price ratio:  46.44
Property taxes:           23,998,000.00
Value added -> mfgr:     244,000,000.00
Retail sales:            696,631,000.00
Service receipts:        102,697,000.00
Wholesale receipts:      648,336,000.00
```

Figure 11. 1970 census overview profile.

2ND COUNT CENSUS, 1970

Population by age and sex:

Age	Male	Female	Total
< 1	3,535	3,291	6,826
1	3,270	3,088	6,358
2	2,956	2,879	5,835
3	3,142	3,077	6,219
4	3,287	3,171	6,458
5	3,530	3,410	6,940
6	3,651	3,488	7,139
7	3,729	3,383	7,112
8	3,649	3,531	7,180
9	3,734	3,579	7,313
10	4,070	3,857	7,927
11	3,769	3,635	7,404
12	3,783	3,718	7,501
13	3,942	3,644	7,586
14	3,874	3,643	7,517
15	4,036	3,579	7,615
16	3,814	3,567	7,381
17	3,869	3,486	7,355
18	3,644	3,063	6,707
19	3,676	2,987	6,663
20	4,122	3,018	7,140
21-25	16,758	14,064	30,822
26-30	10,951	11,278	22,229
31-35	9,139	9,977	19,116
36-40	9,469	9,993	19,462
41-45	9,081	9,900	18,981
46-50	9,238	9,936	19,174
51-55	8,183	9,032	17,215
56-60	7,949	8,839	16,788
61-65	6,614	7,748	14,362
66-70	5,012	6,434	11,446
71-75	3,335	4,631	7,966
76-80	2,155	3,169	5,324
> 80	1,872	3,952	4,824

Figure 11. (Cont'd)

Aggregate $ monthly contract rent --

renter occupied	1,568,825.00
vacant for rent:	226,050.00

Count of occupied units by tenure --

Owned or being bought:	70,809
Cooperative or condo:	62
Rented for cash rent:	27,431
Rented for no cash:	3,536

4th COUNT POPULATION, 1970

Population enrolled in school by age (15%) --

age	students
3-4	956
5-6	8,067
7-13	49,907
14-15	14,357
16-17	11,893
18-19	5,320
20-21	1,334
22-24	1,054
25-34	1,884

Figure 11. (Cont'd)

Count of employed persons by industry		
0	10,739	Agriculture, forestry, fisheries
1	381	Mining
2	9,041	Construction
3	3,134	Furniture and lumber and wood products
4	152	Primary metal industries
5	386	Fabricated metal industries
6	462	Machinery, except electrical
7	130	Electrical machinery, equipment, and supplies
8	1,830	Motor vehicles and other trans. equipment
9	1,445	Other durable goods
10	3,103	Food and kindred products
11	6,727	Textile mill and other textile products
12	655	Printing, publishing, and allied industries
13	637	Chemical and allied products
14	4,158	Other nondurable goods
15	571	Railroads and railway express service
16	1,108	Trucking service and warehousing
17	3,430	Other transportation
18	1,568	Communications
19	2,066	Utilities and sanitary services
20	3,918	Wholesale trade
21	3,423	Food, bakery, and dairy stores
22	3,051	Eating and drinking places
23	2,943	General merchandise retailing
24	3,608	Motor vehicles retailing and service stations
25	7,086	Other retail trade
26	1,397	Banking and credit agencies
27	1,980	Insurance, real estate, and other finance
28	839	Business services
29	1,613	Repair services
30	4,557	Private households
31	4,593	Other personal services
32	661	Entertainment and recreation services
33	4,099	Hospitals
34	2,024	Med. and other health services except hospitals
35	6,567	Public education
36	1,003	Private education
37	496	Other education and kindred services
38	1,416	Welfare, religious, and nonprofit organizations
39	2,037	Legal, engineering, and misc. professional services
40	7,754	Public administration

Source: Bureau of the Census

Census of Population and Housing, 2nd and 4th Counts, 1970
County and City Data Book, 1967
Census Of Governments, 1972
Economic Censuses, 1972

Figure 11. (Cont'd)

```
What profile? (<cr> to see list):  3
Calculating Multiplier.
Employment Multiplier:  2.1221
Income Multiplier:      1.7604

"Valado" Overview Profile

Export employment multiplier:          2.122
Export income multiplier:              1.658
Constant relating tpi to tbv:         0.6339
Value added per empl             $  10,081.00

Housing:
Total assessed valuation:        $ 696,899,000.00
Assessed to market value ratio:       46.44%
Property tax rate:                     3.44%
Average rent:                    $    57.19

Business volume:              1967                  1972
Manufacturing:          $  165,500,000.00     $  244,200,000.00
Retail:                 $  446,251,000.00     $  696,631,000.00
Service:                $   49,389,000.00     $  102,697,000.00
Wholesale:              $  335,108,000.00     $  648,336,000.00
Total                   $  996,248,000.00     $1,691,864,000.00

EDUCATION
=========

Students aged 3 to 19:                          90,500
Children aged 0 to 19:                         141,036
Percent attending school:                       64.17%
Cost of education per student:                 $872.49
Percent federal aid:                            16.17%
Percent state aid:                              54.15%

County operating budget for non-education:              $  52,269,000.00
State sales tax rate:                                   3.83%
Percent of sales tax retained locally:                  51.14%
```

Figure 12. "Valado" overview profile.

What profile? (<cr> to see list): 4
Short BEA Timeseries Profile

Income:

year	non farm	private	government	personal
1959	308,765,000	211,322,000	97,443,000	394,369,000
1962	345,717,000	234,993,000	110,724,000	449,421,000
1965	451,896,000	312,559,000	139,337,000	579,799,000
1966	518,454,000	344,483,000	173,971,000	647,262,000
1967	556,933,000	371,366,000	185,567,000	703,384,000
1968	623,924,000	410,564,000	213,360,000	781,286,000
1969	700,064,000	456,532,000	243,532,000	874,814,000
1970	782,814,000	499,379,000	283,435,000	979,883,000
1971	836,576,000	534,151,000	302,425,000	1,071,241,000
1972	877,861,000	589,628,000	288,233,000	1,144,348,000
1973	994,081,000	689,158,000	304,923,000	1,332,582,000
1974	1,101,994,000	766,241,000	335,753,000	1,497,658,000
1975	1,155,180,000	784,779,000	370,401,000	1,623,936,000
1976	1,314,916,000	916,533,000	398,383,000	1,805,737,000
1977	1,440,043,000	1,020,641,000	419,402,000	1,948,703,000
1978	1,618,344,000	1,151,697,000	466,647,000	2,222,621,000

Employment and Population:

year	employment	population
1959		317,672
1962		333,470
1965		333,529
1966		343,407
1967	138,547	345,390
1968	141,705	349,193
1969	147,390	351,156
1970	151,179	357,248
1971	150,135	363,464
1972	147,353	364,852
1973	154,329	365,741
1974	158,214	375,758
1975	157,685	385,008
1976	162,758	387,376
1977	167,811	390,626
1978	174,331	395,058

Source: Bureau of Economic Analysis

Figure 13. Short BEA employment/income timeseries profile.

What profile? (<cr> to see list): 5
Detailed BEA Timeseries Profile

Employment by Broad Industrial Sources
Full/Part-time Wage/Salary Employment Plus Number of Proprietors

Industry	1978	
Total Employment	174,331	
Number of Proprietors	22,031	
Farm Proprietors	10,549	
Proprietors	1,482	
Total Wage & Salary Employment	152,300	
Farm	4,821	
Non-Farm	147,478	
Private	104,616	
Ag Serv., For., Fish., & Other	179	d
Mining	13	d
Construction	9,964	
Manufacturing	30,867	
Non-Durable Goods	18,863	d
Durable Goods	11,641	d
Transportation & Public Utils.	5,488	d
Wholesale Trade	6,512	d
Retail Trade	22,594	
Finance, Ins., & Real Estate	4,541	d
Services	22,432	d
Government	42,863	
Federal Civilian	7,503	
Federal Military	12,564	
State & Local	22,788	

Figure 14. Detailed BEA employment/income timeseries profile.

Income by Type and by Broad Industrial Sources
Derivation of Personal Income by Place of Residence
(Thousands of Dollars)

Source	1978	
Wage & Salary Disbursements	1,413,698	
Other Labor Income	116,462	
Proprietors' Income	201,754	
Farm	88,539	
Non-Farm	113,215	
Farm	113,570	
Non-Farm	1,618,344	
Private	1,151,697	
Ag Serv., For., Fish., & Other	1,678	d
Mining	205	d
Construction	149,308	
Manufacturing	366,855	
Non-Durable Goods	213,875	d
Durable Goods	150,653	d
Transportation and Public Utils.	93,831	d
Wholesale Trade	80,082	d
Retail Trade	185,190	
Finance, Ins., & Real Estate	59,705	d
Services	193,682	d
Government	466,647	
Federal Civilian	125,024	
Federal Military	132,817	
State & Local	208,806	
Total Income by Place of Work	1,731,914	
(-) Social Insurance	86,772	
Net Income by Place of Work	1,645,142	
(+) Residence Adjustment	-33,894	
Net Income by Place of Residence	1,611,248	
(+) Dividends, Interest, & Rent	227,532	
(+) Transfer Payment	383,841	
Personal Income by Place of Resid.	2,222,621	
Per Capita Personal Income ($)	5,802	
Total Population	395,058	

Source: Bureau of Economic Analysis
d indicates a full or partial nondisclosure
1 indicates rounding of small value.

Figure 14. (Cont'd)

What profile? (<cr> to see list): 6

BLS Labor Force Timeseries Profile

1978 Labor Force Profile

Date	Labor Force	Employment Number	Employment Rate	Unemployment Number	Unemployment Rate
Jan '78	157,413	144,177	91.59%	13,236	8.41%
Feb '78	156,355	145,992	93.37%	10,363	6.63%
Mar '78	158,983	148,559	93.44%	10,424	6.56%
Apr '78	163,508	153,725	94.02%	9,783	5.98%
May '78	165,026	155,692	94.34%	9,334	5.66%
Jun '78	170,300	159,614	93.78%	10,686	6.27%
Jul '78	172,124	160,633	93.32%	11,491	6.68%
Aug '78	171,030	160,816	94.03%	10,214	5.97%
Sep '78	172,038	161,385	93.81%	10,653	6.18%
Oct '78	171,752	161,049	93.77%	10,703	6.23%
Nov '78	166,908	157,001	94.06%	9,907	5.94%
Dec '78	165,417	154,714	93.53%	10,703	6.47%
Annual Average	165,905	155,279	93.60%	10,626	6.40%

Source: Bureau of Labor Statistics

Figure 15. BLS labor force timeseries profile.

```
What profile? (<cr> to see list):  7
What level of detail?  (type ? for help):  ?

type 0 for total employment
type 1 for division level and above
type 2 for 2-digit level and above
type 3 for 3-digit level and above
type 4 for 4-digit level and above
type - to abort this profile

What level of detail?  (type ? for help):  2

Count of employed persons by detailed industry
 SIC    Employment   Industry

          113,549   total
01--        3,951   farm workers (BEA)
07--          756   agric. srvcs forestry fisheries
0700          173     agric. srvcs & hunting
0800          181     forestry
0900          117     fisheries
10--          370   mining
1400          176     nonmetallic minerals exc. fuels
15--        6,532   contract construction
1500        3,030     general building contractors
  .           .               .
  .           .               .
  .           .               .
  .           .               .
  .           .               .
6400          228   insur. agents brokers & service
6500          669   real estate
70--        9,381   services
7000        1,394     hotels & other lodging places
7200        1,316     personal srvcs
7300        1,088     misc. business srvcs
7500          469     auto repair srvcs & garages
7600          168     misc. repair srvcs
7900          332     amusement & recrtn. srvcs n.e.c.
8000        1,905     medical & other health srvcs
8100           88     legal srvcs
8200          160     educ. srvcs
8600          646     nonprofit membership organizations
8900          229     misc. srvcs
91--       21,099   total federal (BEA)
92--       17,540   state & local (BEA)
99--          717   unclassified establishments

Source:  Bureau of the Census, County Business Patterns, 1972
```

Figure 16. Detailed employment profile.

What profile? (<cr> to see list): 8

What level of detail? (type ? for help): 2

Export (Basic) Employment Profile

symbols:
Eir is local employment in industry i
E*r is total local employment
Ei* is national employment in industry i
E** is total national employment

Xir is local export employment in industry i
X*r is total local export employment
LQ+ is a pseudo location quotient derived from Xir
all ratios are percentages.

SIC	Eir	Xir	LQ+	Xir/Eir	Xir/E*r	Xir/X*r	Eir/E*r	Ei*/E**
----	113549	53507	1.891	47.122	47.122	100.000	100.000	100.000
01--	3951	2195	2.249	55.544	1.933	4.101	3.480	1.547
07--	756	548	3.638	72.514	0.483	1.025	0.666	0.274
0800	181	171	18.168	94.496	0.151	0.320	0.159	0.009
0900	117	92	4.723	78.826	0.081	0.172	0.103	0.022
10--	370	110	1.426	29.851	0.097	0.206	0.326	0.802
1400	176	110	2.685	62.756	0.097	0.206	0.155	0.142
15--	6532	2915	1.806	44.623	2.567	5.448	5.753	4.563
1500	3030	1552	2.050	51.214	1.367	2.900	2.668	1.302
.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.
6500	669	174	1.351	25.998	0.153	0.325	0.589	1.094
70--	9381	3474	1.588	37.035	3.060	6.493	8.262	14.908
7000	1394	1271	11.333	91.176	1.119	2.375	1.228	1.113
7200	1316	156	1.134	11.848	0.137	0.291	1.159	1.231
7300	1088	337	1.448	30.949	0.297	0.629	0.958	2.243
7500	469	48	1.115	10.303	0.043	0.090	0.413	0.545
7900	332	69	1.262	20.764	0.061	0.129	0.292	0.628
8000	1905	405	1.270	21.247	0.356	0.756	1.678	4.351
91--	21099	21099	********	100.000	18.581	39.433	18.581	5.103
92--	17540	1134	1.069	6.466	0.999	2.120	15.447	14.448

Source: Bureau of the Census, County Business Patterns, 1972.

Figure 17. Export employment profile.

What profile? (<cr> to see list): 9

1977 County Business Patterns

What level of detail? (type ? for help): 2

Sic	Key	Employment	Industry
----		84,073	Total
07--	D]	300-441	Agricultural Services, Forestry, Fisheries
0700	D]	153-344	Agricultural Services
0800	D]	20-113	Forestry
0900	D]	33-65	Fishing, Hunting, and Trapping
10--	D]	417-512	Mining
1300	B]	20-52	Oil and Gas Extraction
1400	D]	397-479	Nonmetallic Minerals, except Fuels
15--	[D]	6,148-6,177	Contract Construction
1500	[D]	1,963-2,253	General Building Contractors
.		.	.
.		.	.
.		.	.
.		.	.
.		.	.
.		.	.
7600	D]	284-341	Miscellaneous Repair Services
7800	D]	60-286	Motion Pictures
7900	D]	498-644	Amusement Recreation Services
8000	D]	3,671	Health Services
8100	D]	244-323	Legal Services
8200	D]	393-680	Educational Services
8300	D	296-372	Social Services
8400	A	0-19	Museums, Botanical, Zoological Gardens
8600	D	953-975	Membership Organizations
8900	D]	444-577	Miscellaneous Services
899a	D]	20-81	Administrative and Auxiliary
99--	D	126-211	Unclassified Establishments

Non-disclosure keys (minimum-maximum):

A:	0-19	**B:**	20-99	**C:**	100-249	**E:**	250-499
F:	500-999	**G:**	1,000-2,499	**H:**	2,500-4,999	**I:**	5,000-9,999
J:	10,000-24,999	**K:**	25,000-49,999	**L:**	50,000-99,999	**M:**	100,000+

D: aggregated non-disclosures.

Source: Bureau of the Census, County Business Patterns, 1977

Figure 18. 1977 County Business Patterns profile.

```
What profile? (<cr> to see list):  10

Sub-county demographic profiles

dale, al:  5 MCDs or Tracts

Which demographic profile?  (type ? for help):  ?

type:   for:
   1    population counts
   2    household counts
   3    per capita and mean household income
   4    population and per capita income
   5    households and mean household income
   6    households and median household income
   7    1978/1979 population, households, and income
   8    1970 household counts by household income
   9    1978 household counts by household income
  10    MCD/Tract names and codes
  11    next county
  -1    to quit

Which demographic profile?  (type ? for help):  7

1978/1979 population, households, and income
UNIT/CODE     1979 POP    1979 HHS    1978 PCI    1978 HHI  AREA NAME
C   01045       42,210      12,404       4,925      16,180  dale, al
M       5        2,226         706       4,869      15,205  ARITON DIV
M      10        1,364         449       4,961      14,976  ECHO DIV
M      15        3,493       1,099       4,348      13,702  MIDLAND-PINCKARD D
M      20        9,464       3,221       5,104      14,869  NEWTON DIV
M      25       25,663       6,929       4,925      17,467  OZARK DIV

Source:  National Planning Data Corporation, 1979

Which demographic profile?  (type ? for help):  9

1978 household counts by household income
                under     $7,500    $15,00  $25,000  $35,000  $50,000
UNIT/CODE      $7,500    -14,999   -24,999  -34,999  -49,999  or more  AREA NAME
C   01045       3,570      2,786     3,186    1,875      678      184  dale, al
M       5         322        129       177      121       31       16  ARITON DIV
M      10         196         96       124       96       15        5  ECHO DIV
M      15         361        179       219      169       15        8  MIDLAND-PINCKARD D
M      20       1,045        754       881      569      196       53  NEWTON DIV
M      25       1,646      1,628     1,785      920      421      102  OZARK DIV

Source:  National Planning Data Corporation, 1979

Which demographic profile?  (type ? for help):  -1
```

Figure 19. Population/households/income by tract/minor civil division profile.

What profile? (<cr> to see list): 13

Rational Threshold Values

All dollar amounts are in thousands of dollars.
Dollar adjustment based on Consumer Price Index (1967=100).

BUSINESS VOLUME (using Non-Farm Income)

YEAR	Non-Farm income	adjusted income	change	deviation	% deviation
1965	451,896	478,197			
1966	518,454	533,389	55,192	20,190	4.222 %
1967	556,933	556,933	23,544	-11,458	-2.148 %
1968	623,924	598,775	41,842	6,840	1.228 %
1969	700,064	637,581	38,806	3,803	0.635 %
1970	782,814	673,099	35,518	515	0.081 %
1971	836,576	689,675	16,576	-18,426	-2.738 %
1972	877,861	700,607	10,932	-24,070	-3.490 %
1973	994,081	746,868	46,261	11,258	1.607 %
1974	1,101,994	746,103	-765	-35,767	-4.789 %
1975	1,155,180	716,613	-29,490	-64,492	-8.644 %
1976	1,314,916	771,212	54,599	19,596	2.735 %
1977	1,440,043	793,412	22,200	-12,802	-1.660 %
1978	1,618,344	828,221	34,809	-193	-0.024 %

average yearly change:	35,002	
maximum historic positive deviation:	20,190	
maximum historic negative deviation:	-64,492	
positive rtv:		4.22 %
negative rtv:		-6.483 %

Figure 20. RTV profile.

PERSONAL INCOME

YEAR	Personal income	adjusted income	change	deviation	% deviation
1965	579,799	613,544			
1966	647,262	665,907	52,363	-29	-0.005 %
1967	703,384	703,384	37,477	-14,916	-2.240 %
1968	781,286	749,795	46,411	-5,982	-0.851 %
1969	874,814	796,734	46,939	-5,453	-0.727 %
1970	979,883	842,548	45,814	-6,579	-0.826 %
1971	1,071,241	883,134	40,586	-11,807	-1.401 %
1972	1,144,348	913,287	30,153	-22,240	-2.518 %
1973	1,332,582	1,001,189	87,902	35,509	3.888%
1974	1,497,658	1,013,986	12,798	-39,595	-3.955 %
1975	1,23,936	1,007,405	-6,582	-58,975	-5.816 %
1976	1,805,737	1,059,083	51,679	-714	-0.071 %
1977	1,948,703	1,073,666	14,582	-37,811	-3.570 %
1978	2,222,621	1,137,472	63,807	11,414	1.063 %

average yearly change:	52,393	
maximum historic positive deviation:	35,509	
maximum historic negative deviation;	-58,975	
positive rtv:		3.888 %
negative rtv:		-3.897 %

EMPLOYMENT

YEAR	Employment	change	deviation	% deviation
1967	138,547			
1968	141,705	3,158	-95	-0.069 %
1969	147,390	5,685	2,432	1.716 %
1970	151,179	3,789	536	0.364 %
1971	150,135	-1,044	-4,297	-2.842 %
1972	147,353	-2,782	-6,035	-4.020 %
1973	154,329	6,976	3,723	2.527 %
1974	158,214	3,885	632	0.409 %
1975	157,685	-529	-3,782	-2,390 %
1976	162,758	5,073	1,820	1.154 %
1977	167,811	5,053	1,800	1.106 %
1978	174,331	6,520	3,267	1.947 %

average yearly change:	3,253	
maximum historic positive deviation:	3,723	
maximum historic negative deviation:	-6,035	
positive rtv:		2.527 %
negative rtv:		-2.693 %

Figure 20. (Cont'd)

POPULATION

YEAR	Population	change	deviation	% deviation
1965	333,529			
1966	343,407	9,878	5,145	1.543 %
1967	345,390	1,983	-2,750	-0.801 %
1968	349,193	3,803	-930	-0.269 %
1969	351,56	1,963	-2,770	-0.793 %
1970	357,248	6,092	1,359	0.387 %
1971	363,464	6,216	1,483	0.415 %
1972	364,852	1,388	-3,345	-0.920 %
1973	365,741	889	-3,844	-1.054 %
1974	375,758	10,017	5,284	1.445 %
1975	385,008	9,250	4,517	1.202 %
1976	387,376	2,368	-2,365	-0.614 %
1977	390,626	3,250	-1,483	-0.383 %
1978	395,058	4,432	-301	-0.077 %

average yearly change:	4,733	
maximum historic positive deviation:	5,284	
maximum historic negative deviation:	-3,844	
positive rtv:		1.445 %
negative rtv:		-0.527 %

Source: Bureau of Economic Analysis

Figure 20. (Cont'd)

What profile? (<cr> to see list): 98

New or Experimental Profiles Available for Sampling:

Type:	For:
45	CERL-RIMS
60	DLA profile
71	CAS
75	Review of your county list
78	Do-It-Yourself Population Pyramids (1970-1977)
83	BEA Graphics Demo (Ramtek terminal only)
84	ROI-Within-State(s) plot (Ramtek terminal only)
85	ROI plot (Ramtek terminal only)
86	AFLECS (Loser) Input Editor
87	AFLECS (Gainer) Input Editor
88	Population Pyramid
89	Population Pyramid by County
90	Population Pyramid by Year
91	Population by Sex and Age, 170-1975
97	Description of EIFS 2.5 versus EIFS 2.3

What profile? (<cr> to see list):

Figure 21. Menu of experimental profiles.

```
What profile?  (<cr> to see list): 45

                        CERL-RIMS
    Calculates multipliers for IO Codes specified by user.
    Uses 1977 CBP data, 1977 BEA data, and a 1972 IO table.

Non-disclosure ranges are replaced by the midpoint of the range.


Enter new IO code list
   type   ?              to see list of codes
          x              to see your choices
          q or bye       to leave profile
          up to 6 digits to enter a code
          <cr>           to stop entering codes

Enter  ?  x  q  bye  <cr>  or IO code: 140600
140600  Fluid Milk

Enter  ?  x  q  bye  <cr>  or IO code: 140500
140500  Ice Cream & Frozen Desserts

Enter  ?  x  q  bye  <cr>  or IO code:

Your list has 2 codes:
  29    IO: 140500
  30    IO: 140600

Do you wish to add or delete a code?  (a/d/<cr>):
list complete

# IO codes: 2      # SIC codes - US: 2   Area: 2

Do you want to calculate Multipliers?
                                        *** type  s  to stop *** :
 29    IO: 140500    Weight: 0.716049
 30    IO: 140600    Weight: 0.283951


******************** CERL-RIMS Multiplier Computations ********************

Direct Effect (DE)                                                0.568200
  Goods and Services Purchased Locally                 0.399238
  Labor Hired Locally                                  0.168962

Indirect Effect (IE)                                              0.309792
  Agr Share of Local Non-Govt Earnings (P1)            0.059584
  Mfg Share of Local Non-Govt Earnings (P2)            0.291201
  Local Share of US Non-Govt Earnings (S2)             0.001122
  ln(IE) = .65 - .79*P1 - .13*P2 + .17*ln(S2) + 1.03*ln(DE)
  ln(IE)                                              -1.171854

Output Multiplier (Mq) = 1 + DE + IE                              1.877992

Employment Multiplier (Me) = 1 + (E./Ej)*(Mq - 1)                 2.658065
  Employment per Output - Avg (E.)                     0.000031
  Employment per Output - Selected Industries (Ej)     0.000017

Income Multiplier (Mi) = 1 + (I./Ij)*(Mq - 1)                     2.231822
  Income per Output - Avg (I.)                         0.237053
  Income per Output - Selected Industries (Ij)         0.168962

******************** Pausing - <cr> to return to eifs ********************
```

Figure 22. CERL-RIMS profile.

```
What profile  (<cr> to see list):  60
Calculating Multiplier.
Employment Multiplier:  2.1221
Income Multiplier:      1.7604

Do you want to use FSC or SIC commodity codes (fsc or sic) ? sic
Which SIC commodity code (type ? for help) :  2791
Your SIC commodity class is:
Code:  2791
Title:  Typesetting
Are you satisfied ? yes

What is the dollar value of the contract ? 50000

        The maximum number of employees expected to be either
        hired or laid off because of a contract award is:  1.2

        The minimum number of employees expected to be either
        hired or laid off because of a contract awared is:  0.9

        The average number of employees expected to be either
        hired or laid off because of a contract award is:  1.0

        How many employees will be hired or laid off because of
        the contract award according to the employer (i.e.,
        employer's representation) ? 1

The employment multiplier is:  2.076931

        The total employment impact on the local economy due to
        the contract award (using the employer's representation)
        is:  2.1

        The total employment impact on the local economy due to
        the contract award (using the average number of employees
        expected to be hired or laid off by the contract)
        is:  2.1

        If the contractor hires workers due to a contract award,
        the total employment impact is positive. If the
        contractor lays off workers because the contract is not
        awarded, then the total employment impact is negative.
```

Figure 23. DLA profile.

```
What profile?  (<cr> to see list):  71
Your login 'robinson' is restricted

        Aloha from CAS
```

Figure 24. CAS profile.

```
What profile?  (<cr> to see list):  75

You have selected 13 counties:

#     FIPS#              county

1     01045              dale, al
2     01061              geneva, al
3     01067              henry, al
4     01069              houston, al
5     12005              bay, fl
6     12045              gulf, fl
7     12063              jackson, fl
8     12131              walton, fl
9     13007              baker, ga
10    13099              early, ga
11    13131              grady, ga
12    13201              miller, ga
13    13275              thomas, ga
```

Figure 25. Review of county list profile.

```
What profile?  (<cr> to see list):  78

Do-It-Yourself Population Pyramids

Option (type ? for help)? ?

Valid keywords are:
   help, plot, list, area, time, race, review, quit

Option (type ? for help)? race
Which race option (type ? for help)? ?

Valid keywords are:
   help, total, white, nonwhite, both, current, leave

Which race option (type ? for help)? both
White Population and Nonwhite Population selected.
Option (type ? for help)? time
Which time option (type ? for help)? ?

Valid keywords are:
   help, 1970, 1971, 1972, 1973, 1974, 1975, 1976, 1977, all, current
   leave

Which time option (type ? for help)? 1977
1977 added
Which time option (type ? for help)? leave
```

Figure 26. Do-it-yourself population pyramids profile.

```
Option (type ? for help)? plot

                Regional Aggregate - White Population - 1977

                                male    age  female
                                  **    85+  ****
                                 ***  80-84  ******
                                *****  75-79  *******
                             *********  70-74  *************
                          *************  65-69  ****************
                        ***************  55-59  ******************
                     ******************  50-54  ******************
                      *****************  45-49  ******************
                      *****************  40-44  ******************
                    ********************  35-39  ********************
                 ***********************  30-34  ***************************
              ****************************  25-29  ********************************
           *******************************  20-24  **********************************
         *********************************  15-19  **********************************
           ****************************  10-14  ********************************
             ************************    5-9  ************************
             ************************    0-4  ************************

Each "*" represents 408 persons; pyramid total is 298,626.

                Regional Aggregate - Nonwhite Population - 1977

                                male    age  female
                                   *    85+  ***
                                  **  80-84  ***
                                 ***  75-79  ****
                                *****  70-74  ********
                             ********  65-69  ***********
                              *******  60-64  ***********
                             ********  55-59  *************
                            *********  50-54  ***************
                            *********  45-49  ***************
                            *********  40-44  ***************
                           **********  35-39  ******************
                          ***********  30-34  ********************
                       ****************  25-29  ********************
                  *********************************  20-24  **********************************
              ************************************  15-19  ********************************
                 *********************************  10-14  **********************************
                    ******************************    5-9  ************************************
                     *****************************    0-4  ***********************************

Each "*" represents 167 persons; pyramid total is 92,021.

Source:  Bureau of the Census
```

Figure 26. (Cont'd)

```
What profile?  (<cr> to see list):  86

AFLECS (Loser) Editor (Version 1.0)

Which option (type ? for a menu) ? ?

Type:   To:
   1    See a list of your existing files
   2    Get a printout of the input questionnaire
   3    Enter inputs from your terminal
   4    Get the inputs from one of your files
   5    Remove one of your files
   6    See the inputs you have loaded
   7    Run the AFLECS Model
   8    Examine/change your inputs
   9    Store your inputs in a file
  -1    Leave the editor

Which option (type ? for a menu) ? -1
```

Figure 27. AFLECS (Loser) input editor profile.

```
What profile?  (<cr> to see list):  87

AFLECS (Gainer) Editor (Version 1.0)

Which option (type / for a menu) ? ?

Type:   To:
   1    See a list of your existing files
   2    Get a printout of the input questionnaire
   3    Enter inputs from your terminal
   4    Get the inputs from one of your files
   5    Remove one of your files
   6    See the inputs you have loaded
   7    Run the AFLECS Model
   8    Examine/change your inputs
   9    Store your inputs in a file
  -1    Leave the editor

Which option (type ? for a menu) ? -1
```

Figure 28. AFLECS (Gainer) input editor profile.

What profile? (<cr> to see list): 97

A new EIFS program has been installed. This new version presents new data and additional user features.

New features have been added for study area selection:

1) User-defined regions. With the "save" option, you can store and name a frequently used study area definition for retrieval during a later EIFS session.

2) SMSAs. EIFS recognizes standard SMSAs.

3) Help. You can obtain lists of states, counties within a state, standard regions, or user-defined regions on demand.

New data have been added to the EIFS database:

1) 1980 Census. Profile 1 for digested form, profile 80 for unabridged.

2) 1977 County Business Patterns. Available in profile 9.

3) 1978 BEA timeseries. Available in profile 5.

4) 1979 Sub-county demographics. Available in profile 10.

To make room for the new profiles, the menu has been re-arranged; profiles have been renumbered and/or replaced by new ones.

Figure 29. Description of EIFS 2.5 versus EIFS 2.3 profile.

The Nature of the EIFS Forecast Models

EIFS contains two versions for each of five separate submodels, both with and without automatic inflation correction. Each of the submodels corresponds to one of five functional areas (FAs) of military actions:[17]

1. Construction (C)
2. Operations and Maintenance (O&M)
3. Training (T)
4. Mission Change (MC)
5. Contractor/Industrial Type Activities (CITA)

These FAs not only represent different military functions, but they are also likely to create different economic and social effects in the surrounding community. The differences in these socioeconomic effects are chiefly due to the differences in procurement and consumer expenditures for locally produced goods and services (both in total and in terms of the commodity distribution) associated with each FA. For example, on the average, military trainees who live on-post spend less of their income in the local economy than civilian personnel who reside off-post; their patterns of expenditures for various goods and services are also likely to differ. These differences are explained partly by the fact that trainees are generally provided room and board, whereas civilian employees are not. Several other demographic factors that differ between trainees and civilians will also affect the portion of income spent locally and their expenditure patterns; these include marriage rates, number of dependents, and age, sex, and racial compositions.

Even though EIFS consists of a set of five separate forecast models, they are similar enough to be considered as a "generic" regional economic impact model. Figure 30 illustrates the general model structure found in all of the EIFS forecast models. The figure is useful because it not only shows the relationship that a military action has with its regional economy, but also summarizes the interrelationships among and between the various economic and social sectors of the community. More importantly, Figure 30 provides an invaluable tool for understanding the equations for each submodel given in Appendix A.

Regardless of the FA, a military action will usually involve a change in personnel, their wages and salaries, and local procurements for materials and supplies. In EIFS, personnel are classified as either civilian, military permanent party, or military trainee. A further distinction is made between military personnel living on-post, both permanent party and trainee, and those living in the region around the installation. However, EIFS assumes that all civilian employees live off-post.

The only demographic variable explicitly modeled in EIFS is the number of school children who impact local school districts. These children are assumed to be dependents of the civilian and military personnel directly affected by the military action. Population is implicitly modeled here to the extent that only those civilian and military personnel involved with the military action

[17]R. Webster, et al., Interim Report E-52.

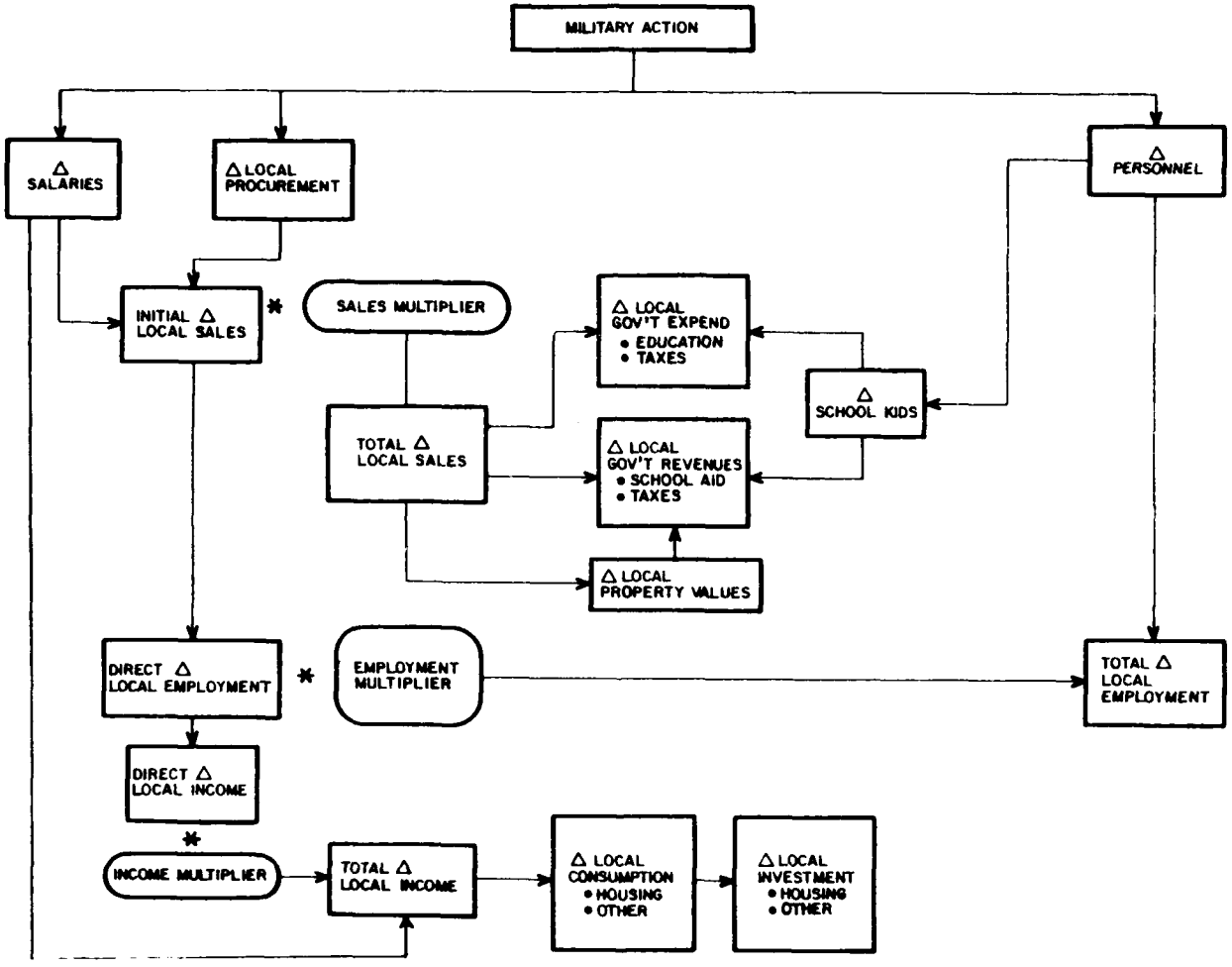

Figure 30. The "generic" EIFS forecast model.

and their dependents are counted in the population change. EIFS does not estimate the local population effects that may be induced as a result of the economic impacts from a military action.

Changes in salaries and local procurements are converted into an initial change in local sales. Local procurements for materials and supplies are assumed to go to merchants who sell wholesale goods or business and professional services. Personnel salaries are converted to local sales of retail goods and personnel services by factors that represent the portion of income spent in the region. These factors differ for civilians and various types of military personnel; they also account for the differences in consumer purchases at post commissary and exchange facilities by military personnel living on- and off-post.

In terms of national income accounting principles, local sales for wholesale and retail goods do not represent the "output" for those sectors, because the value of the sales includes the cost of the goods that are sold. Normally, the trade sectors are treated as "margin" sectors, meaning the value of the goods sold by local merchants is subtracted from their sales. In other words, wholesale and retail trade merchants only sell products; they do not make them. Consequently, the cost of the goods sold is usually treated as sales for those sectors that produce the commodities. To the extent that the commodities sold by local trade merchants are not produced locally, the EIFS forecast models overestimate the initial effect of a military action within the local economy.[18]

Local merchants are assumed to hire or lay off employees because of the initial change in sales. Furthermore, this direct change in local employment is presumed to be proportional to the initial change in local sales. Like the initial change in sales, these workers are employed at either trade or service sector establishments. In addition to employment changes, the initial change in local sales will also affect the wages and salaries of employees in the affected businesses.

The direct changes in local employment and local income will generate subsequent local employment and income changes. The overall subsequent changes in local employment and income caused by the initial change in local sales are called the multiplier process. The multiplier process can be quantified as a "multiplier," which estimates the total changes that result from an initial change. EIFS estimates and uses three types of multipliers: employment, income, and sales multipliers. Consequently, the total change in local employment due to a military action is equal to the product of the direct change in local employment and the employment multiplier, plus the military and civilian personnel who were affected by the military action. The total change in local income due to a military action is equal to the product

[18]For example, U.S. wholesale and retail trade sales receipts for 1972 are about seven times greater than the value added. The 1972 U.S. sales receipts for wholesale and retail trade were $1,154,264,000,000 according to the 1972 Censuses of Wholesale and Retail Trade. The 1972 U.S. value added for wholesale and retail trade was $166,103,000,000, according to the 1972 National Input-Output Table (Survey of Current Business, April 1979, pp 51-72).

of the direct change in local income and the income multiplier, adjusted to reflect local personnel income by place of residence, plus the income of the military and civilian personnel who were affected by the military action. Employment and income changes calculated in EIFS are "full-time" equivalents; i.e., two workers employed for 4 hours a day is the same as one employee working an 8-hour day. Also, total change in local personal income does not include the effects of overtime pay, night-pay differentials, weekend pay, etc. Local personal income in EIFS is defined as the sum of wages and salaries, dividends, interest, rents, transfer payments, and net social insurance payments. The total change in local sales (i.e., business volume) from a military action is equal to the product of the direct change in local sales and the sales multiplier.

Consistent with Keynesian income theory, EIFS relates changes in local consumption to changes in local income. Change in local consumer expenditures for housing and other commodities, such as food, clothing, personal services, etc., are related to changes in local personal income via average propensities to consume. The local populace is assumed to spend 16 percent of its personal income for local housing; the average propensity to consume goods and services other than housing is assumed to be 63 percent of personal income. Differences between house owners and renters are not specified in EIFS, and the average propensities to consume are national averages which do not reflect any regional differences in expenditure patterns.

On the other hand, changes in the local investment reflect changes in the demand for locally produced goods and services. That is, local investment in the business sectors is derived from changes in local consumer expenditures for the goods and services produced in those sectors. Investment in local housing is, in reality, related to changes in local rental income, which, in turn, is computed from changes in local housing expenditures. The factor relating changes in local rental income to changes in local housing expenditures is a national average of 7.75. The average propensity to invest in local housing out of the changes in local rental income is also a national constant, equal to .06. On the other hand, investment in local firms producing goods and services other than housing is derived directly from the changes in consumer demand. The average propensity to invest in local non-housing-type businesses is also a national constant, equal to .12 of the change in local non-housing type consumer expenditures.

The attractiveness of a community relative to the rest of the nation in terms of business location and population residential choices is related to factors such as the area's relative position with respect to personal income, business activity, employment, etc. A military action which affects local business activity, income, employment, and other factors does so in a way that changes the local economy's attractiveness for business and population location. Consequently, these changes are likely to generate changes in the demand for available property. Assuming the supply of property is rather "inelastic" during the short term (i.e., about 1 year), changes in demand for local property will be reflected in changes in local property values. That is, changes in the market value for real property depend on changes in the general level of local prosperity (measured by changes in local business volume). Within EIFS, it is the relative annual change in local business volume that is converted to changes in local property values via a region-specific

factor relating the assessed value of local property to an assessed-to-market-value ratio. "Property" is considered in total within EIFS and is not disaggregated by classifications such as agricultural, residential, commercial, or industrial.

Local government functions are broken down into "education" and "other." Other local government functions include such things as fire and police protection, public welfare and assistance, and sanitation. The change in the number of school children affects both local government expenditures for education (via the average local education expenditures per pupil) and State and Federal aid to local school districts. Changes in local government revenues other than school aid are due to changes in State sales taxes (i.e., via changes in local business activity) retained locally and to changes in local property taxes (i.e., via changes in local property values). EIFS does not estimate changes in local income taxes (where they exist). Finally, changes in local government expenditures to provide services other than education are related to relative annual changes in local business activity.

Running the Models

Entering the Forecast Models Profile

Access to the EIFS forecast models is gained through the Forecast Models Profile (#12) (Figure 31).

Construction FA

The Construction FA forecast models estimate the economic and social consequences of a construction project. The construction project is assumed to be carried out by a construction firm, so that neither the civilian nor the military personnel of the installation are involved in the activity. The original intent and the current structure of the Construction FA model is to simulate the regional socioeconomic effects from constructing post housing for military personnel. The exact scenario modeled here includes the positive socioeconomic impact on a region from building the housing units. The magnitude of these positive effects depends mostly on the extent to which local laborers are used for the construction project and on how much the construction contractor depends on local merchants for needed materials and supplies. On the other hand, the positive effects of the construction activity could be balanced by the negative local economic and social consequences generated because the military personnel and their dependents move into the newly built post housing from the surrounding communities. This means that rents will not be paid for local housing, the affected military personnel and their dependents will acquire a greater share of their goods and services from the post commissary and exchange facilities, and school-age dependents will be attending schools on-post.

In addition, the Construction FA forecast models can simulate the regional socioeconomic impacts of many other types of construction activities: for example, the construction of streets and highways, dams, water and sewage facilities; office buildings; housing for nonmilitary personnel; and the maintenance and repair of this construction. These types of construction activities do not have negative socioeconomic effects on the local communities, because

```
What profile? (<cr> to see list):  12

Functional Area? (<cr> to see list):

Type:      for:
   1       construction
   2       operations, maintenance and repair
   3       training
   4       mission change
   5       commercial/industrial type activities

  10       an introduction to inflation adjustment using price
           deflators
  11       construction (with price deflators)
  12       operations, maintenance and repair (with price deflators)
  13       training (with price deflators)
  14       mission change (with price deflators)
  15       commercial/industrial type activities (with price deflators)

   -       to return to profile selection
control-d to leave eifs
```

Figure 31. Forecast models profile.

they do not involve military personnel and their dependents moving into post housing.

Running the Construction FA models requires that the user provide the answers to several system-supplied questions: six answers for the Construction model without price deflators (FA #1), and ten answers for the Construction model with price deflators (FA #11), not including a project title. Only the questions not concerned with price deflators are discussed here. Price deflation and how to answer price deflator questions in the forecast models will be explained later (see p 73). Figure 32 (Construction FA) is an example run.

"Project name."

Any phrase that describes the action being modeled. It will be printed with the output and serve as a label. This is especially useful when several alternative scenarios are proposed and run for a single military action.

"If entering total expenditures, enter 1
local expenditures, enter 2:"

If the user knows and will be entering construction expenditures going to local firms, then the value 2 (two) should be entered here. The system will then prompt the user for the dollar value of local construction expenditures. If total construction expenditures are to be entered, then the value 1 (one) should be entered here. The system will prompt the user, as a result, for the total dollar value of the construction project.

"Dollar volume of construction project:"

This question is asked if total construction project expenditures are to be entered (i.e., if the user responded to the last question with a value of 1). The total dollar value of expenditure for the construction project is expected. The system will compute the dollar value of local construction expenditures by default.

"Local expenditures for construction project:"

This question is asked if local construction project expenditures are known and are to be entered. This is the dollar value of construction expenditures going to local firms.

"Percent for labor:"

This is the labor requirement for the construction project. In other words, "What percentage of the construction expenditures will be used to hire labor?"

Sources: (1) Check with a local construction firm.

```
Forecast Models - which functional area?  (<cr> to see list)  1

CONSTRUCTION

Project name:  Construction FA Example
If entering total expenditures, enter  1
           local expenditures, enter  2  : 1
Dollar volume of construction project:  $10,000,000
Local expenditures of project:  5287797.50 (calculated)
Percent for labor:  35
Percent for materials:  40
Percent allowed for other:  25.00 (calculated)
Number of military families to move onto base from local region:  23
Average income of affected military personnel:  $15,500


********** CONSTRUCTION IMPACT FORECAST FOR Construction FA Example  **********

Export employment multiplier:                          2.1221
Export income multiplier:                              1.7604
Change in local
  Sales volume ..................... Direct:  $     3,598,000
                                    Induced:  $     4,038,000
                                      Total:  $     7,636,000    (    0.451%)
  Employment ....................... Direct:          296
                                      Total:          408       (    0.277%)
  Income ........................... Direct:  $     2,424,000
                        Total (place of work):  $     2,860,000    (    0.303%)
                  Total (place of residence):  $     2,907,000    (    0.254%)
  Consumption ...................... Housing:  $       507,000
                                Non-housing:  $     1,831,000
  Investment ....................... Housing:  $       236,000
                                Non-housing:  $       220,000
  Number of school children ..........:                  -22      (   -0.024%)
  Property values ....................:  $     6,773,000    (    0.451%)
  Government revenues ..... Taxes:  $       382,000
     State and federal aid to schools:  $       -14,000
  Government expenditures ... Schools:  $        -6,000
                                Other:  $       236,000
                                  Net:  $       230,000
```

Figure 32. Construction FA.

(2) The latest Census of Construction (U.S. Bureau of the Census) has state-specific construction receipts and expenditures by type of construction activity, including expenditures for labor and materials.

(3) The latest National Input-Output Study (U.S. Bureau of Economic Analysis) also has construction receipts and expenditures for labor, materials, and other costs by type of construction activity, but the level of detail for construction expenditures for materials is much greater than for the Census of Construction.

"Percent for materials:"

This percentage of construction expenditures used for materials and supplies. The same data sources and comments concerning the percentage of construction expenditures for hiring labor also apply here. Remember that the sum of the percentage of construction expenditures for labor and materials should not be greater than 100 percent. The sum of these two percentages will usually be less than 100 percent, because construction firms normally have to pay Federal, State, and local taxes, and have a profit margin in addition to payments for labor, materials, and supplies.

"Number of military families moving onto base from local region:"

This is the number of military families moving on-post from the user-defined region into the newly constructed post housing. EIFS implicitly assumes that only one family member is in the military, so this number is the same as the number of the affected military personnel. Again, if this is a construction project not involving families moving into newly built post housing, this question should be ignored.

"Average income of affected military personnel:"

This is the average annual income of those military personnel who reside in the communities of the study area that surround the military installation and who will move into the housing being constructed. Ideally, this should be the income for only those personnel affected by the housing project, although this information is not always precisely known during the planning stage. Check with the Post Personnel Office for this information. Note that income, as used in the EIFS forecast models, is a broader concept than the value of the employees' wages and salaries. Consideration should be made, whenever appropriate, for income earned from second jobs, working dependents, unearned income (i.e., interest, dividends, and rents), etc. Remember, if this is a construction project for other than military housing, this question should be ignored (i.e., type **RETURN** for an answer), because this model assumes that military personnel are not involved in the construction activity.

Operations and Maintenance FA

The Operations and Maintenance FA forecast models calculate the socioeconomic impacts within a regional economy from a military facility's on-going

operation. This forecast model may be used to evaluate impacts from continued operation of an entire military installation or just a part of it (such as the Post Finance Office). As such, the military facility will affect the local economy through the locally produced goods and services that are purchased either by the facility personnel (both civilian and military) or by procurement for services and supplies.

As with other EIFS forecast models, the Operations and Maintenance FA forecast models may be used to analyze the regional economic and social consequences from operating nonmilitary facilities; e.g., from a local shoe factory or from the county police department. Note that the nonmilitary applications will not involve military personnel.

Running the Operations and Maintenance FA models requires that the user answer several system-supplied questions: eight answers for the Operations and Maintenance model without price deflators (FA #2), and 13 answers for the Operations and Maintenance model with price deflators (FA #12), not including a project name. Only the questions not concerned with price deflators are discussed here. Price deflation and how to answer price deflator questions in the forecast models are explained later. Figure 33 is an example of an Operations and Maintenance run.

"Project name:"

Any phrase that describes the action being modeled. It will be printed with the output and serve as a label. This is especially useful when several alternative scenarios are proposed and run for a single military action.

"If entering total expenditures, enter 1
local expenditures, enter 2:"

If the user knows and will be entering annual expenditures for services and supplies going to local firms, then the value 2 (two) should be entered here. The system will then prompt the user for the dollar value of local expenditures for services and supplies. If total annual expenditures for services and supplies are to be entered, then the value of 1 (one) should be entered here. The system will then prompt the user for the total dollar value of annual expenditures for services and supplies.

"Annual expenditures for services and supplies:"

The question is asked if the total annual expenditures for services and supplies are to be entered (i.e., if the user responded to the last question with a value of 1). The dollar value of total annual expenditures for services and supplies is expected. The system will compute the dollar value of annual expenditures for services and supplies going to local firms by default.

```
Forecast Models - which functional area?  (<cr> to see list)  2

OPERATIONS AND MAINTENANCE

Project name:  Operations & Maintenance FA Example
(Enter decreases as negative numbers)
If entering total expenditures, enter  1
           local expenditures, enter  2  : 2
Annual expenditures for local services and supplies:  $250,000
Civilian employment:  43
Average income of civilian personnel:  $25,000
Military employment:  200
Average income of military personnel:  $12,000
Percent of military living on base:  25


******* OPERATIONS AND MAINTENANCE FORECAST FOR Operations & Maintenance FA Example  *******

Export employment multiplier:                          2.1221
Export income multiplier:                              1.7604
Change in local
  Sales volume ..... Direct:  $      2,249,000
                    Induced:  $      2,523,000
                      Total:  $      4,772,000   (   0.282%)
  Employment ..... Direct:                 305
                      Total:                 374   (   0.254%)
  Income ..... Direct:  $      3,833,000
               Total (place of work):  $      4,106,000   (   0.434%)
          Total (place of residence):  $      4,135,000   (   0.361%)
  Consumption ..... Housing:  $        744,000
                 Non-housing:  $      2,605,000
  Investment ..... Housing:  $        346,000
                 Non-housing:  $        313,000
  Number of school children ..... :                186   (   0.205%)
  Property values ..... :  $      4,233,000   (   0.282%)
  Government revenues ..... Taxes:  $        239,000
     State and federal aid to schools:  $        114,000
  Government expenditures .. Schools:  $         48,000
                      Other:  $        147,000
                        Net:  $        196,000
```

Figure 33. Operations and Maintenance FA.

"Annual expenditures for local services and supplies:"

This question is asked if the annual expenditures for services and supplies made locally are known and are to be entered. This is the dollar value of annual expenditures for services and supplies that are made from local firms.

"Civilian employment:"

The number of civilian personnel involved with the operations and maintenance of the function being analyzed. The Post Personnel Office may be a source of information for this question. A change in the level of operations and maintenance can be analyzed: enter a negative number for a decrease in the level of operations or a positive value for an expansion of activity.

"Average income of civilian personnel:"

Average annual income of civilian employees involved with the operations and maintenance or with the change in activity. Check with the Post Personnel Office for this information. Income, as used in EIFS, is a broader concept than just the wages and salaries of the affected employees. Consideration should be given, whenever appropriate, to unearned income (i.e., interest, dividends, and rents), etc. Average income figures are entered into EIFS as positive numbers.

"Military employment:"

The number of military personnel involved with the operations and maintenance of the function being analyzed. The comments for civilian personnel also apply here.

"Average income of military personnel:"

Average annual income of military personnel involved with the operations and maintenance or with the change in activity. The comments for civilian income also apply here.

"Percent of military personnel living on base:"

The percentage of the military personnel involved with the operations and maintenance of the function being analyzed that resides on the military installation. Check with the Post Personnel Office for this information.

Training FA

The Training FA forecast models compute the economic and social effects generated from military nonbasic training activities. Training activities, as modeled in EIFS, affect the local economy through the locally produced goods and services that are purchased either by the nonbasic trainees or by post procurements. Note that the socioeconomic effects are generated from the nonbasic trainees and not from the civilian or military instructors.

Running the Training FA models requires that the user answer several system-supplied questions: six answers for the Training model without price deflators (FA #3), and ten answers for the Training model with price deflators (FA #13), not including a project name. Only the questions not concerned with price deflators are discussed here. Price deflators and how to answer the price deflator questions in the forecast models are explained on p 73. Figure 34 is an example of a Training FA run.

"Project name:"

Any phrase that describes the action being modeled. It will be printed with the output and serve as a label. This is especially useful when several alternative scenarios are proposed and run for a single military action.

"If entering total expenditures, enter 1
local expenditures, enter 2:"

If the user knows and will be entering the change in annual expenditures for services and supplies made from local firms, then the value 2 (two) should be entered here. The system will then prompt the user for the change in local expenditures for services and supplies. If the change in annual expenditures for all services and supplies is to be entered, then the value 1 (one) should be entered here. The system will then prompt the user for the change in annual expenditures for all services and supplies.

"Change in expenditures for services and supplies:"

This question is asked if the total change in expenditures for services and supplies is to be entered (i.e., if the user responded to the last question with a value of 1). The dollar value of the change in all expenditures for services and supplies is expected. The system will compute the dollar value of the change in local expenditures for services and supplies by default.

"Change in expenditures for local services and supplies:"

This question is asked if the change in local expenditures for services and supplies is known and is to be entered. This is the dollar value of the change in expenditures for services and supplies made from local firms.

"Number of (nonbasic) trainees:"

Number of nonbasic trainees involved in the training activity. For a change in the level of training activity, enter a positive value for an expansion of activity or a negative number for a decrease. The Post Personnel Office may be a source of information for this question.

"Average income of trainees:"

Average annual income of nonbasic trainees. Check with the Post Personnel Office for this information. Income, as used in EIFS, is a broader

```
Forecast Models - which functional area?  (<cr> to see list): 3

TRAINING

Project name:  Training FA Example
(Enter decreases as negative numbers)
If entering total expenditures, enter  1
           local expenditures, enter  2    1
Change in expenditures for services and supplies:  $3,300,000
Change in expenditures for local services and supplies:  1744973.25 (calculated)
Number of (non-basic) trainees:  250
Average income of trainees:  $19,500
Percent of trainees living on base:  95


********** TRAINING IMPACT FORECAST FOR Training FA Example  **********

Export employment multiplier                          2.1221
Export income multiplier                              1.7604
Change in local
  Sales volume ..... Direct:  $     3,422,000
                    Induced:  $     3,840,000
                      Total:  $     7,262,000    (   0.429%)
  Employment ..... Direct:              344
                      Total:              450    (   0.305%)
  Income ..... Direct:  $     5,420,000
            Total (place of work):  $     5,835,000    (   0.617%)
        Total (place of residence):  $     5,879,000    (   0.514%)
  Consumption ..... Housing:  $     1,058,000
                 Non-housing:  $     3,704,000
  Investment ..... Housing:  $       492,000
                 Non-housing:  $       444,000
  Number of school children ..... :                12    (   0.013%)
  Property values ..... :  $     6,441,000    (   0.429%)
  Government revenues ..... Taxes:  $       364,000
     State and federal aid to schools:  $         7,000
  Government expenditures ... Schools:  $         3,000
                      Other:  $       224,000
                        Net:  $       227,000
```

Figure 34. Training FA.

concept than just the wages and salaries of the affected trainees. Consideration should be given, whenever appropriate, to income earned from second jobs, working dependents, unearned income (i.e., interest, dividends, and rents), etc. Average income figures are entered into EIFS as positive numbers.

"Percent of trainees living on base:"

The percentage of nonbasic trainees residing on the military installation. Check with the Post Personnel Office for this information.

Mission Change FA

The Mission Change FA forecast models estimate the socioeconomic impacts resulting from major changes in activity at a military installation (e.g., a closure of operations at the post or a change in the mission of the personnel at the installation, such as an armor division substituted for an infantry division. Each action would indicate a different mix of civilian and military personnel before and after the action in addition to changes in local procurements of services and supplies.

Like other EIFS forecast models, the Mission Change FA submodels can be used to analyze the regional socioeconomic effects of factory closures or relocations. Note that nonmilitary applications of this FA model will not involve military personnel.

Running the Mission Change FA models requires the user to respond to 19 system-supplied questions: seven for the Mission Change FA model without price deflation (FA #4), and twelve for the model with price deflators (FA #14), not including a project name. Price deflation and how to answer price deflator questions in the forecast models are discussed on p 73, so only the questions not concerned with price deflators are described here. Figure 35 illustrates a mission change FA.

"Project name:"

Any phrase that describes the action being modeled. It will be printed with the output and serve as a label. This is especially useful when several alternative scenarios are proposed and run for a single military action.

"If entering total expenditures, enter 1
local expenditures, enter 2:"

If the user knows and will be entering the change in annual expenditures for services and supplies made from local firms, then the value 2 (two) should be entered here. The system will then prompt the user for the change in local expenditures for services and supplies. If the change in annual expenditures for all services and supplies is to be entered, the value 1 (one) should be entered here. The system will then prompt the user for the change in annual expenditures for all services and supplies.

```
Forecast Models - which functional area?  (<cr> to see list): 4

MISSION CHANGE

Project name:  Mission Change FA Example
(Enter decreases as negative numbers)
If entering total expenditures, enter  1
         local expenditures, enter  2  : 1
Change in expenditures for services and supplies:  $15,000,000
Change in expenditures for local services and supplies:  7931696.50 (calculated)
Change in civilian employment:  100
Average income of affected civilian personnel:  $25,000
Change in military employment:  300
Average income of affected military personnel:  $19,000
Percent of military living on base:  50


********* MISSION CHANGE IMPACT FORECAST FOR Mission Change FA Example  *********

Export employment multiplier:                          2.1221
Export income multiplier:                              1.7604
Change in local
  Sales volume ..... Direct:  $     12,379,000
                    Induced:  $     13,891,000
                      Total:  $     26,271,000    (   1.553%)
  Employment ....... Direct:              741
                      Total:            1,123    (   0.762%)
  Income ........... Direct:  $     10,173,000
                Total (place of work):  $     11,673,000    (   1.235%)
          Total (place of residence):  $     11,834,000    (   1.034%)
  Consumption ...... Housing:  $      2,130,000
                  Non-housing:  $      7,455,000
  Investment ....... Housing:  $        990,000
                  Non-housing:  $        895,000
  Number of school children ....:              241    (   0.266%)
  Property values ..............:  $     23,300,000    (   1.553%)
  Government revenues ..... Taxes:  $      1,316,000
     State and federal aid to schools:  $        148,000
  Government expenditures ... Schools:  $         62,000
                      Other:  $        812,000
                        Net:  $        874,000
```

Figure 35. Mission Change FA.

"Change in expenditures for services and supplies:"

This question is asked if the total change in expenditures for services and supplies is to be entered (i.e., if the user responded to the last question with a value of 1). The dollar value of the change in all expenditures for services and supplies is expected. The system will compute the dollar value of the change in local expenditures for services and supplies by default.

"Change in expenditures for local services and supplies:"

This question is asked if the change in local expenditures for services and supplies is known and is to be entered. This is the dollar value of the change in expenditures for services and supplies made from local firms.

"Change in civilian employment:"

The net change in the number of civilian personnel resulting from the mission change action. Check with the Post Personnel Office for this information.

"Average income of affected civilians:"

Average annual income of the civilian employees involved with the mission change. Check with the Post Personnel Office for this information. Income, as used in EIFS, is a broader concept than just the wages and salaries of the affected employees. Consideration should be given, whenever appropriate, to income earned from second jobs, working dependents, unearned income (i.e., interest, dividends, and rents,) etc. Average income figures are entered into EIFS as positive numbers.

"Change in military employment:"

The net change in the number of military personnel because of the mission change action. Check with the Post Personnel Office for this information.

"Average income of affected military personnel:"

Average annual income of the military personnel involved with the mission change. The same comments for civilian income also apply here.

"Percent military personnel living on base:"

The percentage of military personnel involved with the mission change that resides on the military installation. Check the Post Personnel Office for this information.

Contractor/Industrial Type Activity (CITA) FA

CITA FA forecast models evaluate the economic and social impacts from contracting with local firms for services presently being performed by civilian or military personnel. The scenario modeled here includes the negative

socioeconomic effects resulting from the release of civilian and military personnel no longer needed, as well as the reduction of local procurements. These negative impacts are balanced by the positive economic and social consequences of contracting the services that were provided by the released civilian and military personnel to local establishments. Although not originally designed for the purpose, the CITA FA models can be used as more general forms of the Mission Change FA models, in which there are contracting activities as well as personnel and local procurement changes.

Running the CITA FA models requires the user to answer several system-supplied questions: eight questions for the CITA model without price deflators (FA #5), and 14 questions for the CITA model with price deflators (FA #15), not including the project name. Only the questions not concerned with price deflation are discussed here. Price deflation and how to answer the price deflator questions in the forecast models are explained on p 37. Figure 36 gives an example of a CITA FA run.

"Project name:"

Any phrase that describes the action being modeled. It will be printed with the output and serve as a label. This is especially useful when several alternative scenarios are proposed and run for a single military action.

"If entering total expenditures, enter 1
local expenditures, enter 2:"

If the user knows and will be entering the change in annual expenditures for services and supplies made from local firms, then the value 2 (two) should be entered here. The system will then prompt the user for the change in local expenditures for services and supplies. If the change in annual expenditures for all services and supplies is to be entered, then the value 1 (one) should be entered here. The system will then prompt the user for the change in annual expenditures for all services and supplies.

"Change in expenditures for services and supplies:"

This question is asked if the total change in expenditures for services and supplies is to be entered (i.e., if the user responded to the last question with a value of 1). The dollar value of the change in all expenditures for services and supplies is expected. The system will compute the dollar value of the change in local expenditures for services and supplies by default.

"Change in expenditures for local services and supplies:"

This question is asked if the change in local expenditures for services and supplies is known and is to be entered. This is the dollar value of the change in expenditures for services and supplies made from local firms.

```
Forecast Models - which functional area?  (<cr> to see list): 5

CONTRACTOR/INDUSTRIAL TYPE ACTIVITIES (CITA)

Project name:  CITA FA Example
(Enter decreases as negative numbers)
If entering total expenditures, enter  1
          local expenditures, enter  2  : 2
Change in expenditures for local services and supplies:   -$150,000,000
Estimated value of contract:  $125,000,000
Change in civilian employment:  -350
Average income of affected civilian personnel:  $23,000
Change in military employment:  -454
Average income of affected military personnel:  $15,500
Percent of affected military living on base:  25


********* CONTRACTOR/INDUSTRIAL FORECAST FOR CITA FA Example  *********

Export employment multiplier:                          2.1221
Export income multiplier:                              1.7604
Change in local
  Sales volume ..............  Direct:  $   -34,828,000
                              Induced:  $   -39,082,000
                                Total:  $   -73,910,000   (  -4.369%)
  Employment ................  Direct:          -1,762
                                Total:          -2,837   (  -1.925%)
  Income ....................  Direct:  $   -20,638,000
                    Total (place of work):  $   -24,858,000   (  -2.629%)
               Total (place of residence):  $   -25,310,000   (  -2.212%)
  Consumption ...............  Housing:  $    -4,556,000
                            Non-housing:  $   -15,945,000
  Investment ................  Housing:  $    -2,118,000
                            Non-housing:  $    -1,913,000
  Population ..............................          438
  Number of school children ...............         -665   (  -0.734%)
  Property values .........................  $   -65,552,000   (  -4.369%)
  Government revenues .......  Taxes:  $    -3,702,000
     State and federal aid to schools:  $      -408,000
  Government expenditures ...  Schools:  $      -172,000
                              Other:  $    -2,283,000
                                Net:  $    -2,456,000
```

Figure 36. Contractor/Industrial Type activities FA.

"Estimated value of contract:"

This question is asked concerning estimated dollar value of a contract to be performed by a local firm. It is assumed that the firm performing the service is located in the region defined for this analysis, otherwise a value 0 (zero) should be entered.

"Change in civilian employment:"

The change in the number of civilian personnel at the military installation due to the CITA action. Check with the Post Personnel Office for this information. Be sure that personnel included in this figure are those to be released. Those personnel transferred from one function to another on the military installation should not be counted here. Enter a negative number for a decrease in personnel and a positive value for an increase in employment.

"Average income of affected civilian personnel:"

Average annual income of those civilian employees who are affected by the CITA action. Check with the Post Personnel Office for this information. As used in EIFS, income is a broader concept than just the wages and salaries of the affected employees. Consideration should be given, whenever appropriate, to income earned from second jobs, working dependents, unearned income (i.e., interest, dividends, and rents), etc. Average income figures are entered into EIFS as positive numbers.

"Change in military employment:"

The change in the number of military personnel at the military installation due to the CITA action. The comments for civilian employees also apply here.

"Average income of affected military personnel:"

Average annual income of those military personnel affected by the CITA action. The comments for civilian income also apply here.

"Percent of military personnel living on-base:"

The percentage of military personnel who are affected by the CITA action and reside on the military installation. Check with the Post Personnel Office for this information.

Changing Parametric Values

At times, it is important for an analyst to know the parametric values that are used in a model. For example, a detailed report summarizing the results of an economic and social impact analysis of proposed military actions should always include a technical appendix describing the model and its parametric values. Or, a user may wish to perform a sensitivity analysis of changes in local tax rates in response to a military action. Also, an analyst

may believe the value of a parametric value is different than the value calculated from the EIFS database.

In any case, the parametric values for the EIFS forecast models may be reviewed or changed through the "examine and/or change multiplier" profile (#11) (Figure 37). The parametric values are reviewed by typing a RETURN after each parametric value is displayed. To alter any parametric value, the user should type the desired value after the system-supplied value is displayed and then depress the RETURN key.

Price Deflation in EIFS

High rates of inflation since 1972 (the base year for EIFS) have made it increasingly necessary for EIFS users to be aware of the effects of inflationary changes on the economic and social impacts projected by the EIFS forecast models. A user can then take the appropriate actions to mitigate these effects. Appendix G discusses the effects of inflation on the economic and social impacts projected by EIFS and procedures for price deflation. FA #10 within profile #12 (Figure 38) is a brief, on-line discussion of price deflation in EIFS. Appendix H gives some commonly used composite price indexes.

There are three ways of dealing with inflation in the EIFS forecast models. First, one may ignore the problems associated with inflationary changes and use the EIFS forecast models without price deflation (see Figures 32 through 36). The major result of ignoring inflationary changes is that projected economic and social impacts will be larger than they would be if a user had entered monetary values consistent with 1972 prices.

Second, a user may deflate monetary values (e.g., annual income of affected civilian employees) by using the EIFS forecast models with price deflation (i.e., FAs 11 through 15). This is done in two steps: (1) convert input dollar values (expressed in the current dollars for some year) to standardized base year values before the impact computations are made; then (2) convert the dollar values in the output listing from the base year values to a desired reference year (possibly in the future). The user enters the price deflators needed to implement these procedures. Figures 39 through 43 are examples of each of the FAs with price deflators.

Third, a precise method of deflating prices in EIFS, although it may be laborious, is to deflate each monetary input item to base year prices (i.e., 1972), run the FA models without price deflators (FAs 1 through 5), and then inflate the output monetary values to a desired reference year. This method of price deflation has the advantage not only of accounting for the overall price effect of inflation on consumption, but also permits EIFS to model the effects of changing relative prices. That is, even though inflation affects the prices of all goods and services, the prices of some goods are affected more than others. This differential effect can be important in estimating the value of expenditures in "real" or "constant dollar" terms. These issues are explained more fully in Appendix G.

```
What profile?  (<cr> to see list): 11
Calculating Multiplier.
Employment Multiplier:    2.1221
Income Multiplier:        1.7604


Which model variables do you want to see or change?  (<cr> to see a list ):

 Type:     To see or change values pertaining to:
   1         Multipliers
   2         Employment (BEA-1972)
   3         Income (BEA-1972)
   4         Business
   5         Housing
   6         Schools
   7         Government (Non-school)
   8         Personnel and families

   -       To return to profile selection
cntrl-d    To leave eifs


Which model variables do you want to see or change?  (<cr> to see a list ): 1

Existing values are given in parentheses.
Type <cr> to leave the existing value unchanged.

MULTIPLIERS
  Employment: (2.1221499)
  Income:     (1.7603602)

Which model variables do you want to see or change?  (<cr> to see a list ): 2

Existing values are given in parentheses.
Type <cr> to leave the existing value unchanged.

EMPLOYMENT (BEA 1972)
  Total:              (147353)
  Wholesale trade:    (4155)
  Retail trade:       (16979)
  Construction:       (6996)
  Services:           (18688)
```

Figure 37. Examine and/or change multiplier profile.

```
Which model variables do you want to see or change?  (<cr> to see a list ): 3

Existing values are given in parentheses.
Type <cr> to leave the existing value unchanged.

INCOME (BEA 1972) (in thousands of dollars)
  Total by place of residence: (1144348)
  Total by place of work:      (945401)
  Wholesale trade:             (33827)
  Retail trade.                (105599)
  Construction:                (65572)
  Services:                    (91300)
  Transfer payments:           (155225)

Which model variables do you want to see or change?  (<cr> to see a list ): 4

Existing values are given in parentheses.
Type <cr> to leave the existing value unchanged.

BUSINESS (1972)
  Total business volume:         (1.6918641e+09)
  Value added by manufacturing: (2.442e+08)

Which model variables do you want to see or change?  (<cr> to see a list ): 5

Existing values are given in parentheses.
Type <cr> to leave the existing value unchanged.

HOUSING
  Assessed value of locally assessed real property: (6.9689907e+08)
  Aggregate property taxes:                          (23998000)
  Aggregate dollar monthly contract rent:            (1568825)
  Occupied rental units, rented for cash:            (27431)
  Aggregate real estate market value:                (1.5005527e+09)
  Constant relating rental income to value:          (7.75)
```

Figure 37. (Cont'd)

```
Which model variables do you want to see or change?  (<cr> to see a list ): 6

Existing values are given in parentheses.
Type <cr> to leave the existing value unchanged.

SCHOOLS
  Population aged 0-19:                          (141036)
  School enrollment aged 3-19:                   (90500)
  Aggregate educational expenditures:            (65506000)
  Education cost per-student:                    (872.48645)
  Proportion of cost covered by federal aid:     (0.16168889)
  Proportion of cost covered by state aid:       (0.54148763)

Which model variables do you want to see or change?  (<cr> to see a list ): 7

Existing values are given in parentheses.
Type <cr> to leave the existing value unchanged.

GOVERNMENT (NON-SCHOOL)
  Aggregate direct general expenditures:                 (1.17775e+08)
  State sales tax rate:                                  (0.038213972)
  Proportion of state sales tax revenue kept locally:    (0.51139778)

Which model variables do you want to see or change?  (<cr> to see a list ): 8

Existing values are given in parentheses.
Type <cr> to leave the existing value unchanged.

PERSONNEL
  Average number of children per family:                 (1.5)
  Average family size:                                   (2.5)
  Average propensity for housing expenditures:           (0.18000001)
  Average propensity for non-housing expenditures:       (0.63)
  Average propensity to invest in housing:               (0.059999999)
  Average propensity to invest in non-housing:           (0.12)
  Proportion spent locally by permanent personnel
      Off-base:                                          (0.33500001)
      On-base:                                           (0.33500001)
  Proportion spent locally by transient personnel (trainees)
      Off-base:                                          (0.33500001)
      On-base:                                           (0.33500001)
```

Figure 37. (Cont'd)

Forecast Models - which functional area? (<cr> to see list). 10

SIMPLE PRICE DEFLATION IN EIFS

Recent high rates of inflation have made it increasely important that some form of price-adjustment be made when running the EIFS forecast models. A simple technique has been implemented in the functional area models. First, the input dollar values (expressed in the current dollars of some year) are converted to equivalent dollar values of a standardized base year (currently 1972) before the impact computations are made. And second, the output dollar values are converted from the prices of the base year to the price levels existing for the desired reference year (possibly in the future).

The functional area models accomplish these conversions with price deflators supplied by the user as additional input. There is one deflator input for each dollar-valued input, one for the base year, and one for the desired output reference year (i.e., the year in whose dollars the output is to be expressed).

The following is a list of several types of price deflators that are acceptable for use in EIFS:

			--- ENR ---			----- INV ----		
	CPI-W	PPI	bldg	const	PCE	non-res	resid	GOV'T
1961	71.5	79.3	54.5	48.5	74.8	74.3	74.7	59.5
1962	72.3	79.6	55.7	49.9	75.5	74.4	73.9	61.3
1963	73.2	79.3	57.0	51.7	76.3	74.7	72.6	62.8
1964	74.1	79.5	58.7	53.7	77.2	75.3	72.6	64.4
1965	75.4	81.1	60.1	55.6	78.2	76.1	73.5	66.2
1966	77.6	83.8	62.4	58.4	80.1	77.9	75.3	69.2
1967	79.8	84.0	64.4	61.3	82.0	80.3	77.5	72.4
1968	83.2	86.1	69.2	66.1	85.0	83.3	81.0	76.4
1969	87.6	89.4	75.8	72.8	88.7	87.0	87.8	81.3
1970	92.8	92.7	80.2	79.1	92.7	91.6	90.6	87.9
1971	96.8	95.7	90.5	90.0	96.6	96.3	94.9	94.0
1972	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1973	106.2	113.1	108.5	108.3	106.1	104.0	109.2	106.9
1974	117.9	134.4	114.9	115.3	117.1	116.5	120.5	117.9
1975	128.7	146.9	124.5	126.2	126.3	132.9	131.2	129.2
1976	136.1	153.7	135.9	137.1	133.0	139.9	140.8	137.3
1977	144.9	163.1	147.3	147.2	141.2	148.5	158.0	147.0
1978	155.9	175.7	159.6	158.5	151.6	160.9	178.4	158.4
1979	173.7	197.8	173.5	171.5	166.3	177.2	200.8	173.2
1980	197.1	225.7	185.4	184.9	184.8	195.5	219.5	193.8
1981	217.3	246.3	199.9	201.8	201.7	213.7	235.0	212.2
1982	230.3	251.3	213.0	218.5	213.2	225.7	242.4	226.4
1983	237.4	254.5	227.4	232.3	221.9	230.3	243.4	236.9

Source: Selected issues of the SURVEY OF CURRENT BUSINESS published by the U.S. Department of Commerce (note: all indexes have been converted to a base year of 1972).

CPI-W is the Consumer Price Index (urban wage earners and clerical workers) for all itmes.
PPI is the Producer Price Index for all commodities.
ENR are the Engineering News-Record construction cost indexes for building and construction.
PCE is the fixed-weighted price index for personal consumption expenditures.
INV are the fixed-weighted price indexes for non-residential and residential investment expenditures.
GOV'T is the fixed-weighted price index for all government expenditues.

Figure 38. Simple price deflation in EIFS.

```
Forecast Models - which functional area?  (<cr> to see list): 11

CONSTRUCTION

Project name:  Construction FA with Inflation Adjustment
If entering total expenditures, enter  1
            local expenditures, enter  2  : 1
Dollar volume of construction project:  $4,300,000
Local expenditures of project:  2273753.00 (calculated)
  price deflator: 232.3
Percent for labor:  12
Percent for materials:  35
Percent allowed for other:  53.00 (calculated)
Number of military families to move onto base from local region:  150
Average income of affected military personnel:  $20,000
  price deflator: 237.4
Price deflator for baseline year (1972): 100.0
Price deflator for output: 237.4

********** CONSTRUCTION IMPACT FORECAST FOR Construction FA with Inflation Adjustment **********

Export employment multiplier:                          2.1221
Export income multiplier:                              1.7604
Change in local
  Sales volume ..... Direct:   $      795,000
                     Induced:  $      892,000
                       Total:  $    1,687,000    (    0.042%)
  Employment ....... Direct:          22
                       Total:          32       (    0.022%)
  Income ........... Direct:   $      406,000
              Total (place of work):   $      502,000    (    0.022%)
          Total (place of residence):  $      512,000    (    0.019%)
  Consumption ...... Housing:  $     -152,000
                     Non-housing:  $      323,000
  Investment ....... Housing:  $      -71,000
                     Non-housing:  $       39,000
  Number of school children ....:         -144       ( -0.160%)
  Property values ..............:  $    1,496,000    (    0.042%)
  Government revenues ..... Taxes  $       84,000
    State and federal aid to schools:  $     -210,000
  Government expenditures  Schools  $      -89,000
                       Other  $       52,000
                         Net  $      -37,000
```

Figure 39. Construction FA with simple price deflation.

```
Forecast Models - which functional area?  (<cr> to see list): 12

OPERATIONS AND MAINTENANCE

Project name:  Operations & Maintenance FA with Infation Adjustment
(Enter decreases as negative numbers)
If entering total expenditures, enter  1
           local expenditures, enter  2  : 1
Annual expenditures for services and supplies:  -$2,500,000
Annual expenditures for local services and supplies:  -1321949.38 (calculated)
  price deflator: 254.5
Civilian employment:  -234
Average income of civilian personnel:  $23,000
  price deflator: 237.4
Military employment:  -12
Average income of military personnel:  $19,000
  price deflator: 237.4
Percent of military living on base:  45
Price deflator for baseline year (1972): 100.0
Price deflator for output: 237.4

******* OPERATIONS AND MAINTENANCE FORECAST FOR Operations & Maintenance FA with Infation Adjustment  *******

Export employment multiplier:                              2.1221
Export income multiplier:                                  1.7604
Change in local
  Sales volume ..................... Direct:  $    -5,691,000
                                    Induced:  $    -6,387,000
                                      Total:  $   -12,078,000   (  -0.301%)
  Employment ....................... Direct:           -312
                                      Total:           -386   (  -0.262%)
  Income ........................... Direct:  $    -6,517,000
                       Total (place of work):  $    -7,207,000   (  -0.321%)
                  Total (place of residence):  $    -7,281,000   (  -0.268%)
  Consumption ...................... Housing:  $    -1,311,000
                                Non-housing:  $    -4,587,000
  Investment ....................... Housing:  $      -609,000
                                Non-housing:  $      -550,000
  Number of school children ..... :                    -232   (  -0.256%)
  Property values ............... :           $   -10,712,000   (  -0.301%)
  Government revenues ..... Taxes.  $      -605,000
     State and federal aid to schools.  $      -337,000
  Government expenditures ... Schools:  $      -142,000
                                Other:  $      -373,000
                                  Net:  $      -516,000
```

Figure 40. Operations and Maintenance FA with simple price deflation.

```
Forecast Models - which functional area?  (<cr> to see list): 13

TRAINING

Project name   Training FA with Inflation Adjustment
(Enter decreases as negative numbers)
If entering total expenditures, enter  1
           local expenditures, enter  2  : 1
Change in expenditures for services and supplies:  $12,000,000
Change in expenditures for local services and supplies:  6345357.00 (calculated)
  price deflator: 254.5
Number of (non-basic) trainees:  133
Average income of trainees:  $12,000
  price deflator: 237.4
Percent of trainees living on base:  80
Price deflator for baseline year (1972): 100.0
Price deflator for output: 237.4


************ TRAINING IMPACT FORECAST FOR Training FA with Inflation Adjustment  ************

Export employment multiplier:                              2.1221
Export income multiplier:                                  1.7604
Change in local
  Sales volume ..............  Direct:  $     6,511,000
                              Induced:  $     7,306,000
                                Total:  $    13,818,000    (   0.344%)
  Employment ................  Direct:          208
                                Total:          293       (   0.199%)
  Income ....................  Direct:  $     2,634,000
                    Total (place of work):  $     3,423,000    (   0.153%)
               Total (place of residence):  $     3,507,000    (   0.129%)
  Consumption ...............  Housing:  $       631,000
                            Non-housing:  $     2,210,000
  Investment ................  Housing:  $       294,000
                            Non-housing:  $       265,000
  Number of school children .....    :                26       (   0.028%)
  Property values ...............    :  $    12,255,000    (   0.344%)
  Government revenues .........  Taxes:  $       692,000
     State and federal aid to schools:  $        37,000
  Government expenditures ....  Schools:  $       16,000
                              Other:  $       427,000
                                Net:  $       443,000
```

Figure 41. Training FA with simple price deflation.

```
Forecast Models - which functional area?  (<cr> to see list): 14

MISSION CHANGE

Project name:  Mission Change FA with Inflation Adjustment
(Enter decreases as negative numbers)
If entering total expenditures, enter  1
           local expenditures, enter  2  : 2
Change in expenditures for local services and supplies:  -$10,000,000
  price deflator: 254.5
Change in civilian employment:  -110
Average income of affected civilian personnel:  $12,000
  price deflator: 237.4
Change in military employment:  -50
Average income of affected military personnel:  $18,000
  price deflator: 237.4
Percent of military living on base:  33
Price deflator for baseline year (1972): 100.0
Price deflator for output: 237.4

********* MISSION CHANGE IMPACT FORECAST FOR Mission Change FA with Inflation Adjustment  *********

Export employment multiplier:                          2.1221
Export income multiplier:                              1.7604
Change in local
  Sales volume ..............  Direct:  $   -10,807,000
                              Induced:  $   -12,127,000
                                Total:  $   -22,935,000    (  -0.571%)
  Employment ..... .....      Direct:          -285
                                Total:          -426    (  -0.289%)
  Income ..... .....          Direct:  $    -3,942,000
                  Total (place of work):  $    -5,252,000    (  -0.234%)
              Total (place of residence):  $    -5,392,000    (  -0.198%)
  Consumption ..... .....     Housing:  $      -971,000
                          Non-housing:  $    -3,397,000
  Investment ..... .....      Housing:  $      -451,000
                          Non-housing:  $      -408,000
  Number of school children ..... :              -138    (  -0.153%)
  Property values ..... ..... :        $   -20,341,000    (  -0.571%)
  Government revenues ..... Taxes:  $    -1,149,000
     State and federal aid to schools:  $      -201,000
  Government expenditures ... Schools:  $       -85,000
                              Other:  $      -709,000
                                Net:  $      -793,000
```

Figure 42. Mission change FA with simple price deflation.

```
Forecast Models - which functional area?  (<cr> to see list): 15

CONTRACTOR/INDUSTRIAL TYPE ACTIVITIES (CITA)

Project name:  CITA FA with Inflation Adjustment
(Enter decreases as negative numbers)
If entering total expenditures, enter  1
           local expenditures, enter  2  : 1
Change in expenditures for services and supplies:  -$1,500,000
Change in expenditures for local services and supplies:  -793169.63 (calculated)
  price deflator: 254.5
Estimated value of contract:  $2,000,000
  price deflator: 254.5
Change in civilian employment:  -125
Average income of affected civilian personnel:  $25,000
  price deflator: 237.4
Change in military employment:  -80
Average income of affected military personnel:  $21,000
  price deflator: 237.4
Percent of affected military living on base:  25
Price deflator for baseline year (1972): 100.0
Price deflator for output: 237.4


********* CONTRACTOR/INDUSTRIAL FORECAST FOR CITA FA with Inflation Adjustment  *********

Export employment multiplier:                          2.1221
Export income multiplier:                              1.7604
Change in local
  Sales volume ..... Direct:  $     -2,195,000
                    Induced:  $     -2,463,000
                      Total:  $     -4,658,000    (  -0.116%)
  Employment ....... Direct:            -230
                      Total:            -259     (  -0.176%)
  Income ........... Direct:  $     -5,155,000
            Total (place of work):  $     -5,421,000    (  -0.242%)
       Total (place of residence):  $     -5,449,000    (  -0.201%)
  Consumption ...... Housing:  $       -981,000
                  Non-housing:  $     -3,433,000
  Investment ....... Housing:  $       -456,000
                  Non-housing:  $       -412,000
  Population ..................:            -103
  Number of school children ...:            -178     (  -0.197%)
  Property values .............:  $     -4,132,000    (  -0.116%)
  Government revenues ... Taxes:  $       -233,000
    State and federal aid to schools:  $       -259,000
  Government expenditures  Schools:  $       -109,000
                            Other:  $       -144,000
                              Net:  $       -253,000
```

Figure 43. Contractor/Industrial Type Activities FA with simple price deflation.

6 SUMMARY

This report has provided a functional manual for using EIFS that will be useful to DOD planners, analysts, and engineers. It identifies and clarifies the various profiles within EIFS which represent both the system's initial profiles and those developed to meet specific needs of its users. These profiles also represent an expansion of the system's analytical capabilities.

This manual is designed to be somewhat independent of the internal analytical structure of EIFS; the information here should be used only as introductory guidance to EIFS to establish an historical perspective for its use. For information about more specific issues, the user should refer to separate technical documents or seek on-line assistance.

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APPENDIX A: FORECAST MODEL EQUATIONS

CONSTRUCTION

$$\Delta EXl = \Delta EXp * (1 - 1/Me)$$

$$\Delta EXll = \%cl * \Delta EXl$$

$$\Delta EXlm = \%cm * \Delta EXl$$

$$\Delta BVd = \Delta EXlm + (bh + bo) * \Delta EXll - F * [12 * r + (\%off - \%on) * Ym]$$

$$\Delta BVt = \Delta BVd * Ms$$

$$\Delta BVi = \Delta BVt - \Delta BVd$$

$$\Delta EMd = (\Delta BVd / TSspw) + (\Delta EXLL / Cypw)$$

$$\Delta EMt = (\Delta BVd / TSspw) * Me + (\Delta EXll / Cypw)$$

$$\Delta Yd = (\Delta BVd / TSspw) * TSypw + \Delta EXll$$

$$\Delta Ytw = (\Delta BVd / TSspw) * TSypw * My + \Delta EXll$$

$$\Delta Ytr = (\Delta BVd / TSspw) * TSypw * My * radj + \Delta EXll$$

$$\Delta Ch = (bh * \Delta Ytr) - (12 * r * F)$$

$$\Delta Co = bo * \Delta Ytr$$

$$\Delta Ih = ih * rpv * \Delta Ch$$

$$\Delta Io = io * \Delta Co$$

$$\Delta S = \%c * c * F$$

$$\Delta PV = (av / amv) * (\Delta BVt / tbv72)$$

$$\Delta GRe = (\%af + \%as) * sc * \Delta S$$

$$\Delta GRo = (tp * \Delta PV) + (\%st * ts * \Delta BVt)$$

$$\Delta GRt = \Delta GRe + \Delta GRo$$

$$\Delta GEe = [1 - (\%af + \%as)] * sc * \Delta S$$

$$\Delta GEo = gb * (BVt / tbv72)$$

$$\Delta GEt = \Delta GEe + \Delta GEo$$

$$\Delta GEn = \Delta GEt - \Delta GRt$$

MISSION CHANGE

$$\Delta EXl = \Delta EXp * (1 - 1/Me)$$

$$\Delta BVd = \Delta EXl + (bh + bo) * (Pc * Yc) + [(\%on * \%m) + (\%off + bh) * (1 - \%m)] * (Pm * Ym)$$

$$\Delta BVt = \Delta BVd * Ms$$

$$\Delta BVi = \Delta BVt - \Delta BVd$$

$$\Delta EMd = (\Delta BVd / TSspw) + Pc + Pm$$

$$\Delta EMt = (\Delta BVd / TSspw) * Me + Pc + Pm$$

$$\Delta Yd = (\Delta BVd / TSspw) * TSypw + (Pc * Yc) + (Pm * Ym)$$

$$\Delta Ytw = (\Delta BVd / TSspw) * TSypw * My + (Pc * Yc) + (Pm * Ym)$$

$$\Delta Ytr = (\Delta BVd / TSspw) * Tsypw * My * radj + (Pc * Yc) + (Pm * Ym)$$

$$\Delta Ch = bh * \Delta Ytr$$

$$\Delta Co = bo * \Delta Ytr$$

$$\Delta Ih = ih * rpv * \Delta Ch$$

$$\Delta Io = io * \Delta Co$$

$$\Delta S = \%c * c * [(1 - \%m) * Pm + Pc]$$

$$\Delta PV = (av / amv) * (\Delta BVt / tbv72)$$

$$\Delta GRe = (\%af + \%as) * sc * \Delta S$$

$$\Delta GRo = (tp * \Delta PV) + (\%st * ts * \Delta BVt)$$

$$\Delta GRt = \Delta GRe + \Delta GRo$$

$$\Delta GEe = [1 - (\%af + \%as)] * sc * \Delta S$$

$$\Delta GEo = gb * (\Delta BVt / tbv72)$$

$$\Delta GEt = \Delta GEe + \Delta GEo$$

$$\Delta GEn = \Delta GEt - \Delta GRt$$

OPERATIONS AND MAINTENANCE

$$\Delta EXl = \Delta EXp * (1 - 1/Me)$$

$$\Delta BVd = \Delta EXl + (bh + bo) * (Pc * Yc) + [(\%on * \%m) + (\%off + bh) * (1 - \%m)] * (Pm * Ym)$$

$$\Delta BVt = \Delta BVd * Ms$$

$$\Delta BVi = \Delta BVt - \Delta BVd$$

$$\Delta EMd = (\Delta BVd / TSspw) + Pc + Pm$$

$$\Delta EMt = (\Delta BVd / TSspw) * Me + Pc + Pm$$

$$\Delta Yd = (\Delta BVd / TSspw) * TSypw + (Pc * Yc) + (Pm * Ym)$$

$$\Delta Ytw = (\Delta BVd / TSspw) * TSypw * My + (Pc * Yc) + (Pm * Ym)$$

$$\Delta Ytr = (\Delta BVD / TSspw) * TSypw * My * radj + (Pc * Yc) + (Pm * Ym)$$

$$\Delta Ch = bh * \Delta Ytr$$

$$\Delta Co = bo * \Delta Ytr$$

$$\Delta Ih = ih * rpv * \Delta Ch$$

$$\Delta Io = io * \Delta Co$$

$$\Delta S = \%c * c * [(1 - \%m) * Pm + Pc]$$

$$\Delta PV = (av / amv) * (\Delta BVt / tbv72)$$

$$\Delta GRe = (\%af + \%as) * sc * \Delta S$$

$$\Delta GRo = (tp * \Delta PV) + (\%st * ts * \Delta BVt)$$

$$\Delta GRt = \Delta GRe + \Delta GRo$$

$$\Delta GEe = [1 - (\%af + \%as)] * sc * \Delta S$$

$$\Delta GEo = gb * (\Delta BVt / tbv72)$$

$$\Delta GEt = \Delta GEe + \Delta GEo$$

$$\Delta GEn = \Delta GEt - \Delta GRt$$

TRAINING

$$\Delta EXl = \Delta EXp * (1 - 1/Me)$$

$$\Delta BVd = \Delta EXl + [(\%on * \%m) + (\%off + bh) * (1 - \%m)] * (Pm * Ym)$$

$$\Delta BVt = \Delta BVd * Ms$$

$$\Delta BVi = \Delta BVt = \Delta BVd$$

$$\Delta EMd = (\Delta BVd / TSspw) + Pm$$

$$\Delta EMt = (\Delta BVd / TSspw) * Me + Pm$$

$$\Delta Yd = (\Delta EMd / TSspw) * TSypw + (Pm * Ym)$$

$$\Delta Ytw = (\Delta Yd / TSspw) * TSypw * My + (Pm * Ym)$$

$$\Delta Ytr = (\Delta Yd / TSspw) * TSspw * My * radj + (Pm * Ym)$$

$$\Delta Ch = bh * \Delta Ytr$$

$$\Delta Co = bo * \Delta Ytr$$

$$\Delta Ih = ih * rpv * \Delta Ch$$

$$\Delta Io = io * \Delta Co$$

$$\Delta S = \%c * c * [(1 - \%m) * Pm]$$

$$\Delta PV = (av / amv) * (\Delta BVt / tbv72)$$

$$\Delta GRe = (\%af + \%as) * sc * \Delta S$$

$$\Delta GRo = (tp * \Delta PV) + (\%st * ts * \Delta BVt)$$

$$\Delta GRt = \Delta GRe + \Delta GRo$$

$$\Delta GEe = [1 - (\%af + \%as)] * sc * \Delta S$$

$$\Delta GEo = gb * (\Delta BVt / tbv72)$$

$$\Delta GEt = \Delta GEe + \Delta GEo$$

$$\Delta GEn = \Delta GEt - \Delta GRt$$

CONTRACTOR/INDUSTRIAL-TYPE ACTIVITIES

$$\Delta EXl = \Delta EXp * (1 - 1/Me)$$

$$\Delta BVd = \Delta EXl + \Delta EXc + (bh + bo) * (Pc * Yc) + [(\%on * \%m) + (\%off + bh) * (1 - \%m)] * (Pm * Ym)$$

$$\Delta BVt = \Delta BVd * Ms$$

$$\Delta BVi = \Delta BVt - \Delta BVd$$

$$\Delta EMd = (\Delta BVd / TSspw) + Pc + Pm$$

$$\Delta EMt = (\Delta BVd / TSspw) * Me + Pc + Pm$$

$$\Delta Yd = (\Delta BVd / TSspw) * TSypw + (Pc * Yc) + (Pm * Ym)$$

$$\Delta Ytw = (\Delta BVd / TSspw) * TSypw * My + (Pc * Yc) + (Pm * Ym)$$

$$\Delta Ytr = (\Delta BVd / TSspw) * TSypw * My * radj + (Pc * Yc) + (Pm * Ym)$$

$$\Delta Ch = bh * \Delta Ytr$$

$$\Delta Co = bo * \Delta Ytr$$

$$\Delta Ih = ih * rpv * \Delta Ch$$

$$\Delta Io = io * \Delta Co$$

$$\Delta S = \%c * c * [(1 - \%m) * Pm + Pc]$$

$$\Delta PV = (av / amv) * (\Delta BVt / tbv72)$$

$$\Delta GRe = (\%af + \%as) * sc * \Delta S$$

$$\Delta GRo = (tp * \Delta PV) + (\%st * ts * \Delta BVt)$$

$$\Delta GRt = \Delta GRe + \Delta GRo$$

$$\Delta GEe = [1 - (\%af + \%as)] * sc * \Delta S$$

$$\Delta GEo = gb * (\Delta BVt / tbv72)$$

$$\Delta GEt = \Delta GEe + \Delta GEo$$

$$\Delta GEn = \Delta GEt - \Delta GRt$$

USER-SUPPLIED VARIABLES

ΔEXc Dollar value of the contracted service for the Contractor/ Industrial Type Activities FA forecast model: this figure is assumed to represent a contract with a local business establishment.

ΔEXl Dollar value of post expenditures for local services and supplies that are related to the military action: this figure is either entered by the user directly (if it is known) or computed by default. Items supplies by GSA or DLA should not be included, unless they can be traced to local manufacturers. The Post Comptroller may be a source of information to determine the dollar value and place of origin of post expenditures. The local area for post expenditures should be the same as the study region defined by the user (i.e., upon entering EIFS). A negative value is entered for a decrease in military activity and a positive value is used if there is an expansion. Note, that for the Construction FA forecast model this represents local construction expenditures, otherwise these are local expenditures for services and supplies.

ΔEXp Dollar value of post expenditures for all services and supplies that are related to the military action: this figure is entered by the user when the local purchases are not known. The system will then compute the local purchases by default. Items supplies by GSA or DLA are not normally included. The Post Comptroller may be a source of information for determining this value. A negative value is entered for a decrease in military activity and a positive value is used if there is an expansion. Note, that for the Construction FA forecast model this represents construction expenditures, otherwise these are expenditures for services and supplies.

F Number of military families moving on-post from the user-defined region of influence into newly constructed post housing. It is assumed that there is only one military employee per family.

Pc Number of civilian personnel affected by the military action: these are separated or newly added civilian employees. Personnel transferred from one position to another on-post or within the same geographic area should not be included. Enter a positive number for an increase or a negative number for a decrease.

Pm Number of military personnel affected by the military action: these are the transferred (out of the region) or newly added military personnel. Personnel shifted from one position to another on-post or transferred within the same geographic area should not be included. Enter a positive number for an expansion or a negative for a decrease. For the Training FA forecast model, these are non-basic trainee-type military personnel.

Yc Average annual income of civilian personnel affected by the military action; however, this may not always be known accurately during planning stages. Check with the Post Personnel Office for this information. Income, in EIFS, is a broader concept than just the wages and salaries of employees. Consideration should also be given, if possible, to income earned from second jobs, working dependents, unearned income (i.e., interest, dividends, and rents), etc. Average income figures are entered into EIFS as positive numbers.

Ym Average annual income of all military personnel affected by the military action. The same comments about Yc also apply here.

%cl Percentage of construction expenditures used to hire labor: this is the total labor requirements for the construction project.

SOURCES: (1) Check with a local construction firm; (2) The latest CENSUS OF CONSTRUCTION (US Bureau of the Census) has state-specific receipts and expenditures by type of construction activity, including expenditures for labor and materials; (3) The latest NATIONAL INPUT-OUTPUT STUDY (US Bureau of Economic Analysis) also has construction receipts and expenditures by type of construction activity; however, the level of detail for construction material expenditures is much greater than in the CENSUS OF CONSTRUCTION.

%cm Percentage of construction expenditures used to purchase materials and supplies. The same comments and data sources as for %cl also apply here.

%m Percentage of affected military personnel residing on-post. Check with the Post Personnel Office for this information.

SYSTEM-SUPPLIED VARIABLES

amv Assessed to market value ratio for local property.

SOURCE: 1972 CENSUS OF GOVERNMENTS (U.S. Bureau of the Census).

av Total assessed value of local real property.

SOURCE: 1972 CENSUS OF GOVERNMENTS (U.S. Bureau of the Census).

bh The average propensity to consume local housing out of personal income. A breakdown of consumer expenditures revealed little variation for different levels of income except at very low levels. A national constant value of .16 is used in EIFS. This estimate corresponds to the statistics published in the Strategic Air Command Manual 173-661, SALARY IMPACT REPORT (B3500) (March 1975).

SOURCES: (1) THE 1967 MARKET PROFILES OF CONSUMER PRODUCTS (National Industries Conference Board); (2) THE 1976 FEDERAL EMPLOYEES ALMANAC (Federal Employees News Digest); (3) THE 1974 MILITARY MARKET FACTS BOOK (Army Times Magazine); and (4) 1975 SELECTED MANPOWER STATISTICS (U.S. Department of Defense).

bo The average propensity to consume local nonhousing type goods and services out of personal income. A national average value of .63 is currently being used in EIFS. This statistic is derived in the same manner and from the same data sources as the average propensity to consume local housing (bh).

c The average number of children per military family. A national average value of 1.5 children per military family is used in EIFS.

SOURCE: THE 1974 MILITARY MARKET FACT BOOK (Army Times Magazine).

gb The local government operating budget, excluding education. Educational expenditures are subtracted from local government direct general expenditures.

SOURCE: 1972 CENSUS OF GOVERNMENTS (U.S. Bureau of the Census).

ih The average propensity to invest in local housing out of rental income. A national average value of .06 is currently used in EIFS.

SOURCES: (1) THE 1967 ANNUAL STATISTICAL SUMMARY (U.S. Department of Housing and Urban Development) and (2) THE HUD STATISTICAL YEARBOOK (U.S. Department of Housing and Urban Development).

io The average propensity to invest in local nonhousing type business activity. A national average value of .12 is currently used in EIFS.

SOURCES: THE 1967 ANNUAL STATISTICAL SUMMARY (U.S. Department of Housing and Urban Development) and (2) STATISTICS OF INCOME-BUSINESS INCOME (U.S. Internal Revenue Service).

r — The average monthly rent. It is computed by dividing total regional rental receipts by the number of renters in the area.

SOURCE: 1970 CENSUS OF POPULATION (U.S. Bureau of the Census).

radj — A residence adjustment to convert income by place of work to income by place of residence. At present, only a crude adjustment for local commuting patterns is made. It is the ratio of total personal income by place of residence (less transfer payments) to total earnings by place of work for 1972.

SOURCE: BEA REGIONAL ECONOMIC INFORMATION SYSTEM (U.S. Bureau of Economic Analysis).

rpv — A constant relating rental income to the value of rental property. A national average value of 7.75 is used in EIFS.

SOURCE: 1972 CENSUS OF GOVERNMENTS (U.S. Bureau of the Census).

sc — The cost of education per child. It is the expenditures per pupil in average daily attendance in public elementary and secondary day schools, by state, for the 1972-73 school year.

SOURCE: OFFICE OF EDUCATION (U.S. Department of Health, Education, and Welfare).

tbv72 — Total local business volume for 1972. It is calculated by summing total local retail and wholesale trade sales, total local services receipts, and value added for local manufacturers.

SOURCE: 1972 CENSUS OF BUSINESS (U.S. Bureau of the Census).

tp — The local property tax rate. It is derived by dividing regional property tax revenues by the total assessed value of local real property.

SOURCE: 1972 CENSUS OF GOVERNMENTS (U.S. Bureau of the Census).

ts — The state sales tax rate as of 1 July 1974.

SOURCE: ANALYSIS STAFF (U.S. Treasury Department).

Cypw — Construction sector earnings per worker. This is the local ratio of construction sector earnings to construction sector employment for 1972.

SOURCE: BEA REGIONAL ECONOMIC INFORMATION SYSTEM (U.S. Bureau of Economic Analysis).

Me — The export-employment multiplier based on the "location quotient" methodology.

SOURCE: 1972 COUNTY BUSINESS PATTERNS (U.S. Bureau of the Census).

Ms — The export-sales multiplier based on the "location quotient" methodology. At present, the export-employment multiplier (Me) is used as a "proxy" until research can be carried out.

My — The export-income multiplier based on the "location quotient" methodology.

SOURCES: (1) 1972 COUNTY BUSINESS PATTERNS (U.S. Bureau of the Census), and (2) BEA REGIONAL ECONOMIC INFORMATION SYSTEM (U.S. Bureau of Economic Analysis).

TSspw — Trade and service sector sales per worker ratio. This is the local ratio of the value of sales to the number of employees for retail and wholesale trade and selected service sectors in 1972.

SOURCES: (1) 1972 CENSUS OF BUSINESS (U.S. Bureau of the Census) and (2) BEA REGIONAL ECONOMIC INFORMATION SYSTEM (U.S. Bureau of Economic Analysis).

TSypw — Trade and service sector earnings per worker ratio. This is the local ratio of earnings to employment for retail and wholesale trade and selected services sector in 1972.

SOURCE: BEA REGIONAL ECONOMIC INFORMATION SYSTEM (U.S. Bureau of Economic Analysis).

%af — Percentage of local educational expenditures financed by Federal aid.

SOURCE: STATE AND LOCAL EXPENDITURES FOR LOCAL SCHOOLS BY GOVERNMENT SOURCE OF FINANCING BY STATE, 1969-70 (U.S. Bureau of the Census).

%as — Percentage of local education expenditures financed by State aid.

SOURCE: STATE AND LOCAL EXPENDITURES FOR LOCAL SCHOOLS BY GOVERNMENT SOURCE OF FINANCING BY STATE, 1969-70 (U.S. Bureau of the Census).

%c — Percentage of children attending local schools. It is the ratio of school children to the total number of persons under 18 years of age.

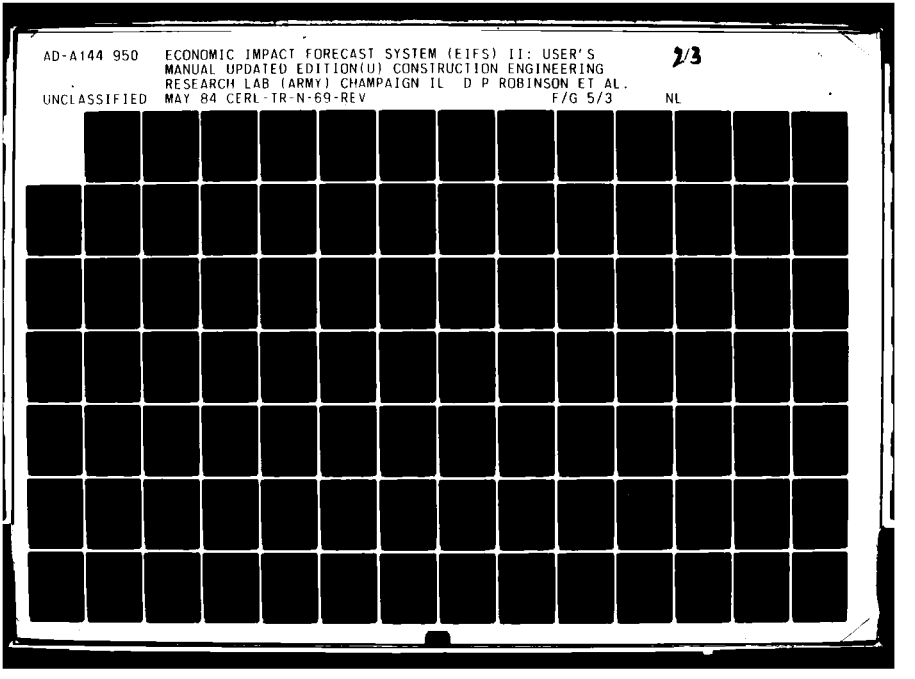
SOURCE: 1970 CENSUS OF POPULATION (U.S. Bureau of the Census).

%off — Percentage of income spent locally by military personnel residing off-post. A national average value of .335 is currently used in EIFS.

%on Percentage of income spent locally by military personnel residing on-post. The same value is used here as is used for %off, at least until better data become available.

%st Percentage of state sales tax retained by local governments.

SOURCE: STATE TAX GUIDE (Commerce Clearinghouse).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ECONOMIC IMPACT FORECAST SYSTEM (EIFS) II: USER'S MANUAL UPDATED EDITION(U) CONSTRUCTION ENGINEERING RESEARCH LAB (ARMY) CHAMPAIGN IL D P ROBINSON ET AL.
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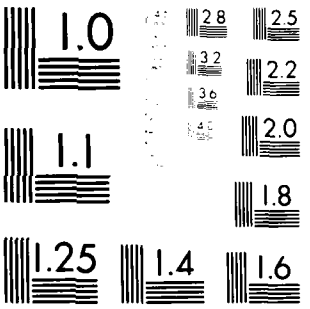

CALCULATED VARIABLES

ΔBVd Direct change in housing activity attributable to the military action. This represents the change in sales volume at local retail and wholesale trade merchants and at local business, personal, and professional service establishments where the civilian and military personnel spend their wages and salaries and where local procurements are made.

ΔBVi Induced changed in local business volume due to the military action. Business volume is defined as local business activity or sales and is the sum of total retail and wholesale trade sales, total selected service receipts, and value-added by manufacturing.

ΔBVt Total change in local business volume due to the military action.

ΔCh Change in local consumer expenditures for housing. No distinction is made between owner-occupied and renter-occupied housing.

ΔCo Change in local consumer expenditures, excluding local expenditures for housing.

ΔEMd Direct change in local employment due to the military action. These are assumed to be the employees of the local retail, wholesale, and service establishments that are initially affected by the military action plus, in addition, the affected military and civilian personnel.

ΔEMt Total change in local employment due to the military action. This not only includes the direct and secondary changes in local employment, but also includes those personnel who are initially affected by the military action.

ΔEXl Dollar value of post expenditures for local services and supplies that are related to the military action. When computed by default, this figure is estimated by multiplying the total expenditures for services and supplies (i.e., Δ EXp) by a factor representing the local availability of services and supplies. At present, the local availability of services and supplies is measured by (1 - 1/Me).

ΔEXll Change in construction project expenditures used to hire local labor.

ΔEXlm Change in construction project expenditures used to purchase local services and supplies.

ΔGEe Change in local government education expenditures due to the military action.

ΔGEn Net change in local government expenditures due to the military action.

ΔGEo Change in local government expenditures other than for education due to the military action. These expenditures provide local fire and police protection, sanitation, welfare and income assistance, parks and recreation, public transportation, etc.

ΔGEt Total change in local government expenditures due to the military action.

ΔGRe Change in Federal and State aid for education due to the military action.

ΔGRo Change in local government property and sales tax revenues due to the military action.

ΔGRt Total change in local government revenues due to the military action.

ΔIh Change in investment for local housing--both rental and owner-occupied.

ΔIo Change in investment for local non-housing type business activity.

ΔPOP Change in local population due to the military action.

ΔPV Change in the value of local real property.

ΔS Change in the number of children attending local public schools due to the military action. These children are the dependents of the civilian and military personnel affected by the military action.

SalAdj This is a factor used in the CITA FA forecast model to estimate a population change due to a CITA action.

ΔYd Direct change in local wages and salaries due to the military action. This is assumed to be earnings of the employees in local retail, wholesale, and service establishments that are initially affected by the military action plus the income of the affected civilian and military personnel.

ΔYtr Total change in local personal income of residents due to the military action. This not only includes the direct and secondary changes in local personal income, adjusted for commuting patterns, but also includes the income of the civilian and military personnel initially affected by the military action.

ΔYtw Total change in local wages and salaries earned in the area due to the military action. This is the sum of the direct and secondary changes in wages and salaries plus the income of the civilian and military personnel affected by the military action.

APPENDIX B: DEFINING STUDY AREAS

Introduction

Upon entering EIFS, the first question a user is asked is how he/she wants to define the study area. Mechanically, this task is simple: all one does is specify one or more counties. EIFS will carry out the necessary aggregations of its database to coincide with the desired geographic delineation. But how does one decide which counties to include and which counties to exclude? It is always the analyst's responsibility to define and be able to justify the region of interest. For a person not accustomed to carrying out regional analyses, justifying a particular study area may not be easy. Even among experienced regional analysts, delineating a study region is a thorny problem, but a very important issue. The justification of study areas is usually ignored--perhaps because the region is predefined (e.g., for an analysis of the fiscal impact of a tax cut within the State of Illinois) or maybe because the regions were the only available units of observation for a "cross-section" study.

With respect to military actions, such as installation closures, defining the geographic region of influence to analyze the economic and social effects of those actions has often proven to be very important and controversial. Its importance lies in the fact that the magnitude of the economic impacts is known to vary with the size of the study area.[19] That is, the economic impact of a military action on an entire state will generally be greater in absolute terms than the impact experienced in a single county. On the other hand, the economic impact will usually be greater at the local level if it is compared to current levels of economic activity.

Unfortunately, few universally accepted rules are available to help an analyst choose a study area. Thus, a region must be defined somewhat subjectively or arbitrarily. This means that careful thought and judgment should be exercised when delineating regions. Therefore, the following discussion provides several conceptual foundations and some practical advice to help EIFS users define and justify their study areas.

The Concept of a Region

Other than a geographic aggregate, what is a region? If an economist, geographer, cartographer, weather analyst, or forester were asked to define a region, there would probably be as many different answers as people questioned. This diversity of opinion is due mostly to the different uses of spatial aggregates.

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[19] J. A. Chalmers and E. J. Anderson, Economic/Demographic Assessment Manual (Bureau of Reclamation, U.S. Department of the Interior, November 1977), p 13.

Edgar Hoover describes the nature of regions as follows:[20]

> Common to all definitions of a region is the idea of a geographic area constituting an entity, so that significant statements can be made about the area as a whole. . . . Basic to the idea of a region is a high degree of correlation of behavior among its various parts.

With respect to the first aspect, regions are useful for at least three reasons. First, aggregating space into a region so that the area can be described by its characteristics is more efficient and, at times, more useful than examining its parts. For example, it is more convenient to compute and examine totals or averages for a county as a whole than to examine the individual census returns. Second, analyzing information for a regional aggregate can be enlightening only if the activities within the area are interdependent. And finally, administering, planning, and implementing public policies can be more efficient if the basic data are aggregated to correspond to the area being administered.

The second aspect of a region insures that the geographic aggregate "makes sense." That is, before the region can be useful, the parts of the geographic region must be interrelated in terms of the purpose for the spatial aggregation. In other words, one cannot study the impact of floods on the populace residing in a floodplain if the floodplain's geographic area is not defined. The same is true of analyzing the economic and social impacts of a military action; i.e., the geographic area affected by the military action must be delineated.

Three conceptual types of regions are described within the regional analysis literature: administrative, homogeneous, and functional. Regions are sometimes delineated along administrative or political boundaries (e.g., the State of Alabama). It is claimed that since the institutional framework within which economic and social policies are designed and implemented is of overriding importance, then the geographic unit of analysis should coincide with the same administrative or political boundaries. Also, specialized data are often compiled and reported only for administrative areas or political units. The major problem with using administrative units for regional economic impact analysis is that they rarely correspond to meaningful economic units. That is, trading or commuting patterns are not normally inhibited from crossing administrative or political boundaries such as county or state lines.

Homogeneity of one form or another can be used to justify some regions. For example, one can envision a coal mining region, a river-basin region, an air pollution region, or even a German-speaking area. What binds these areas is usually some common physical, economic, social, or statistical characteristic. Again, as with administrative regions, the interrelationships that define economic areas usually do not coincide with the extent of a river basin's floodplain for instance.

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[20] Edgar M. Hoover, An Introduction to Regional Economics, 2nd Edition (Alfred A. Knopf, 1975), p 151.

Most regional and urban analysts performing socioeconomic impact analysis prefer the functional area concept for defining study regions.[21] Regions defined in this way explicitly consider the economic linkages and spatial dimensions between and among the residential population and businesses located in the geographic area. In other words, commuting and trading patterns are of prime concern. This type of region is often called "nodal" because:

> . . . the region is perceived as being composed of heterogeneous nodes of different size (cities, towns, villages and sparsely populated rural areas) that are linked together functionally. These functional links can be identified through observation of flows of people, factors, goods and communications.[22]

Examination of a map shows that population and businesses are not spread evenly over space, but are concentrated at specific locations called "agglomerations." The factors that generate these agglomerations are varied: e.g., transportation advantages (such as the confluence of several rivers), resource deposits, factor endowments, local infrastructure (such as good schools and public transportation facilities), climate, and even proximity to firms that supply needed production requirements or provide ready markets.

Practical Issues

In defining study areas, one important issue is determining the smallest geographic unit for which data are available. This is important not only for defining regions, but also for carrying out analyses (especially socioeconomic impact analyses). Within EIFS, the county is the smallest geographic unit available for delineating study areas for impact analysis. From past experience, county aggregates have been quite adequate for defining regions to carry out economic and social impact analyses. Although some data are available at the census tract level (e.g., population and income) which could possibly be used to delineate regions, the data needed to analyze economic impacts are readily available only at the county level, unless one is willing to conduct expensive and time-consuming surveys.[23] The EIFS database does contain income and population estimates for census tracts and minor civil districts, but these data are not used to define study areas or to carry out socioeconomic impact analyses.

With respect to impact analyses, it is probably obvious that a region should be the geographic area in which the significant economic and social consequences of the project occur. But beyond the general conceptual guidelines for region types and the restriction of using counties as the smallest

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[21] The concept of a functional economic area (FEA) appears to have been developed by Karl Fox: see K. A. Fox and T. K. Kuman, "The Functional Economic Area: Delineation and Implications for Economic Analysis and Policy," Papers and Proceedings, Regional Science Association, Vol. 15 (1965), pp 57-85.

[22] Harry W. Richardson, Regional Economics (University of Illinois Press, 1979), p 21.

[23] J. A. Chalmers and E. J. Anderson, p 13.

geographic units, there is not much formal advice about defining regions that can be given to EIFS users. However an analyst decides to delineate a study area, the decision will have to be based on his/her considered judgment, possibly from past experience, and on any specific knowledge of the area.

It may be useful to imagine a study area being comprised of two parts. The first, which may be called the "primary impact area," is the geographic area where those civilian and military personnel and their dependents directly affected by the proposed military action reside and shop. The second part, the "secondary impact area," is generally larger than the primary impact area, but also consists of the geographic area which is likely to capture the significant secondary economic impacts resulting from the spending behavior of the affected personnel and their dependents and any past expenditures for services and supplies affected by the action.

Of the two, rigorously defining the primary impact area is probably easier, because it is usually determined by the residence pattern of the affected civilian and military personnel (i.e., assuming they and their dependents shop near their residences). If the geographic pattern of expenditures by the affected personnel and their dependents is expected to differ greatly from their residence pattern, then some effort should also be made to determine the spatial pattern for expenditures. The primary impact area is likely to be the area in which the demographic and social effects of a military action are likely to be the most intense; thus, it is apt to be the area where most of the controversy is generated.

There are two ways to delineate primary impact areas. The first is to consult a map and, using a convenient radius, specify the geographic area surrounding the installation within which post employees are likely to reside and shop. In other words, "how far do the affected civilian and military personnel commute to work?" Note that it is wise to include all counties that fall within the commuting radius, either in total or in part. A recent survey of many Air Force personnel (both civilian and military) indicates that fewer than 1 percent reside more than 50 miles from the base where they work.[24] Appendix D provides the regional definitions of primary impact areas for selected military installation, based on a commuting radius of 50 miles.

If a proposed military action is expected to generate significant economic and social effects or if it is likely to be controversial with nearby communities, then a more rigorous definition of the primary impact area may be advisable; i.e., determine the actual residential and shopping patterns of the affected personnel. This can be done either by survey or by using information from personnel records. Then a simple "rule of thumb" can be adopted: e.g., "if 5 percent or more of the affected personnel reside in a particular county, then that county should be included in the primary impact area." The exact percentage [illegible] ied by judgment and will undoubtedly depend on the significance of the expected impacts or the level of controversy they are likely to generate. If the residence pattern of the affected civilian and military personnel cannot be determined with assurance (e.g., the

[24]W. Gunther, Table 10 of A Socioeconomic Survey of Air Force Employees, a report prepared for Headquarters Air Force Engineering and Services Center (Tyndall AFB, FL, November [illegible], 1982), p 17.

specific personnel to be affected by the action may not be identified), then the residence pattern of the entire installation work force may be substituted. Keep in mind that the geographic area may change if the residence pattern of the work force for the entire installation is much different than that of those employees directly affected by the proposed military action.

The task of defining the secondary impact area is not as straightforward as determining the primary impact area. Actually, this is equivalent to answering the following questions:

1. Where are the post expenditures for supplies and services made?

2. Where do the merchants that provide personnel and post operations with goods and services purchase their inventories?

3. Where do the employees of these local establishments reside?

In other words, the secondary impact area is the geographic region in which all the spending, respending, and productive activities implied by the "multiplier process" occur. Considering the importance of trade activity in the multiplier process, the secondary impact area should not only contain the primary impact area, but also any nearby trade and service centers and their market areas as well. In practice, this means that the study area for analyzing impacts of most military actions (i.e., the secondary impact area) will be larger than the primary impact area. However, two qualifications must be considered:

> In general, the more sparsely settled a study area, the larger will be the market area of the wholesale-retail center with the consequence that the regional (secondary) impact area will include large areas and will differ substantially from the local (primary) impact area. In more densely settled parts of the country, less difference will exist in the geographic boundaries of the two areas and in many parts of the East and the Upper Midwest, the two areas may coincide.[25]

An obvious choice for a major regional trade and service center to be included as part of the secondary impact area is a Standard Metropolitan Statistical Area (SMSA). SMSAs are likely choices because they include a central city or cities and the surrounding territory that is economically and socially dominated by the city. A major criterion for determining the boundaries of SMSAs is the commuting patterns of workers; however, the area included must be densely settled.[26] Consequently, not all areas of the country fall within the boundaries of an SMSA. This is unfortunate because if the primary impact area does not fall within the limits of any SMSA, the analyst must decide which SMSA to include in the secondary impact area. One could

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[25] J. A. Chalmers and E. J. Anderson, p 40.

[26] R. Nemin, A. Reznek, and R. Spoeri, Regions of Influence: Applicability of Existing Methodologies, Task Report 1 (Department of Commerce, 1979), p 4-2. A report prepared for the Environmental Planning Division, Directorate of Engineering Services, Headquarters Air Force Engineers, Tyndall AFB, FL.

choose the nearest SMSA to the primary impact area, but the nearest SMSA may not be the trade and service center that most attracts the merchants of the primary impact area. Appendix F shows the SMSAs and their constituent counties.

An alternative choice for secondary impact areas is the Bureau of Economic Analysis (BEA) economic areas. These areas (183 in all, covering all of the United States, including Alaska and Hawaii) were delineated specifically from the principles for functional economic areas (as proposed by Fox and Kumar)[27] and are good choices as secondary impact areas. To be specific:

> The Bureau of Economic Analysis (BEA) Economic Areas are nodal functional areas delineated to facilitate regional economical analysis. Each area consists of an economic node--a standard metropolitan statistical area (SMSA), or similar area, that serves as a center of economic activity--and the surrounding counties that are economically related to the center. To the extent possible, each area includes the place-of-work and place-of-residence of its labor force.[28]

For rural counties, where commuting patterns cannot be determined by economic ties, the assignment to BEA economic areas was made with supplemental data, such as metropolitan newspaper circulation figures and the advice of State and local officials who were familiar with the geographic and economic characteristics of the areas. Final delineations were made after a review by State planning offices, university bureaus of business and economic research, and field offices of Federal agencies involved in water resource planning.[29] Appendix E lists BEA economic areas and their constituent counties.

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[27] K. A. Fox and T. K. Kumar, pp 57-85.

[28] Bureau of Economic Analysis, BEA Economic Areas (U.S. Department of Commerce, 1977), p 1.

[29] Bureau of Economic Analysis, 1980 OBERS BEA Regional Projections (U.S. Department of Commerce, July 1981), p 189.

APPENDIX C: COUNTY NAMES

01000 state of alabama
01001 autauga
01003 baldwin
01005 barbour
01007 bibb
01009 blount
01011 bullock
01013 butler
01015 calhoun
01017 chambers
01019 cherokee
01021 chilton
01023 choctaw
01025 clarke
01027 clay
01029 cleburne
01031 coffee
01033 colbert
01035 conecuh
01037 coosa
01039 covington
01041 crenshaw
01043 cullman
01045 dale
01047 dallas
01049 de kalb
01051 elmore
01053 escambia
01055 etowah
01057 fayette
01059 franklin
01061 geneva
01063 greene
01065 hale
01067 henry
01069 houston
01071 jackson
01073 jefferson
01075 lamar
01077 lauderdale
01079 lawrence
01081 lee
01083 limestone
01085 lowndes
01087 macon
01089 madison
01091 marengo
01093 marion
01095 marshall
01097 mobile
01099 monroe
01101 montgomery
01103 morgan
01105 perry
01107 pickens
01109 pike
01111 randolph
01113 russell
01115 st clair
01117 shelby
01119 sumter
01121 talladega
01123 tallapoosa
01125 tuscaloosa
01127 walker
01129 washington
01131 wilcox
01133 winston

02000 state of alaska
02010 aleutian islands
02020 anchorage
02030 angoon
02040 barrow
02050 bethel
02060 bristol bay borough
02070 bristol bay division
02080 cordova mc carthy
02090 fairbanks
02100 haines
02110 juneau
02120 kenai cook inlet
02130 ketchikan
02140 kobuk
02150 kodiak
02160 kuskokwim
02170 matanuska susitna
02180 nome
02190 outer ketchikan
02200 prince of wales
02210 seward
02220 sitka
02230 skagway yakutat
02240 southeast fairbanks
02250 upper yukon
02260 valdez chitina whittier
02270 wade hampton
02280 wrangell petersburg
02290 yukon koyukuk

04000 state of arizona
04001 apache
04003 cochise
04005 coconino
04007 gila
04009 graham
04011 greenlee
04013 maricopa
04015 mohave
04017 navajo
04019 pima
04021 pinal
04023 santa cruz
04025 yavapai
04027 yuma

05000 state of arkansas
05001 arkansas
05003 ashley
05005 baxter
05007 benton
05009 boone
05011 bradley
05013 calhoun
05015 carroll
05017 chicot
05019 clark
05021 clay
05023 cleburne
05025 cleveland
05027 columbia
05029 conway
05031 craighead
05033 crawford
05035 crittenden
05037 cross
05039 dallas
05041 desha
05043 drew
05045 faulkner
05047 franklin
05049 fulton
05051 garland
05053 grant
05055 greene
05057 hempstead
05059 hot spring
05061 howard
05063 independence
05065 izard
05067 jackson
05069 jefferson
05071 johnson
05073 lafayette
05075 lawrence
05077 lee
05079 lincoln
05081 little river
05083 logan
05085 lonoke
05087 madison
05089 marion
05091 miller
05093 mississippi
05095 monroe
05097 montgomery
05099 nevada
05101 newton
05103 ouachita
05105 perry
05107 phillips
05109 pike
05111 poinsett
05113 polk
05115 pope
05117 prairie
05119 pulaski
05121 randolph
05123 st francis
05125 saline
05127 scott
05129 searcy
05131 sebastian
05133 sevier
05135 sharp
05137 stone
05139 union
05141 van buren
05143 washington
05145 white
05147 woodruff
05149 yell

06000 state of california
06001 alameda
06003 alpine
06005 amador
06007 butte
06009 calaveras
06011 colusa
06013 contra costa
06015 del norte
06017 el dorado
06019 fresno
06021 glenn
06023 humboldt
06025 imperial
06027 inyo
06029 kern
06031 kings
06033 lake
06035 lassen
06037 los angeles
06039 madera
06041 marin
06043 mariposa
06045 mendocino
06047 merced
06049 modoc
06051 mono
06053 monterey
06055 napa
06057 nevada
06059 orange
06061 placer
06063 plumas
06065 riverside
06067 sacramento
06069 san benito
06071 san bernardino
06073 san diego
06075 san francisco
06077 san joaquin
06079 san luis obispo
06081 san mateo
06083 santa barbara
06085 santa clara
06087 santa cruz
06089 shasta
06091 sierra
06093 siskiyou
06095 solano
06097 sonoma
06099 stanislaus
06101 sutter
06103 tehama
06105 trinity
06107 tulare
06109 tuolumne
06111 ventura
06113 yolo
06115 yuba

08000 state of colorado
08001 adams
08003 alamosa
08005 arapahoe
08007 archuleta
08009 baca
08011 bent
08013 boulder
08015 chaffee
08017 cheyenne
08019 clear creek
08021 conejos
08023 costilla
08025 crowley
08027 custer
08029 delta
08031 denver
08033 dolores
08035 douglas
08037 eagle
08039 elbert
08041 el paso
08043 fremont
08045 garfield
08047 gilpin
08049 grand
08051 gunnison
08053 hinsdale
08055 huerfano
08057 jackson
08059 jefferson
08061 kiowa
08063 kit carson
08065 lake
08067 la plata
08069 larimer
08071 las animas
08073 lincoln
08075 logan
08077 mesa
08079 mineral
08081 moffat
08083 montezuma
08085 montrose
08087 morgan
08089 otero
08091 ouray
08093 park
08095 phillips
08097 pitkin
08099 prowers
08101 pueblo
08103 rio blanco
08105 rio grande
08107 routt
08109 saguache
08111 san juan
08113 san miguel
08115 sedgwick
08117 summit
08119 teller
08121 washington
08123 weld
08125 yuma

09000 state of connecticut
09001 fairfield
09003 hartford
09005 litchfield
09007 middlesex
09009 new haven
09011 new london
09013 tolland
09015 windham

10000 state of delaware
10001 kent
10003 new castle
10005 sussex

11000 district of columbia
11001 district of columbia

12000 state of florida
12001 alachua
12003 baker
12005 bay
12007 bradford
12009 brevard
12011 broward
12013 calhoun
12015 charlotte
12017 citrus
12019 clay
12021 collier
12023 columbia
12025 dade
12027 de soto
12029 dixie
12031 duval
12033 escambia
12035 flagler
12037 franklin
12039 gadsden
12041 gilchrist
12043 glades
12045 gulf
12047 hamilton
12049 hardee
12051 hendry
12053 hernando
12055 highlands
12057 hillsborough
12059 holmes
12061 indian river
12063 jackson
12065 jefferson
12067 lafayette
12069 lake
12071 lee
12073 leon
12075 levy
12077 liberty
12079 madison
12081 manatee
12083 marion
12085 martin
12087 monroe
12089 nassau
12091 okaloosa
12093 okeechobee
12095 orange
12097 osceola

12099 palm beach
12101 pasco
12103 pinellas
12105 polk
12107 putnam
12109 st johns
12111 st lucie
12113 santa rosa
12115 sarasota
12117 seminole
12119 sumter
12121 suwannee
12123 taylor
12125 union
12127 volusia
12129 wakulla
12131 walton
12133 washington

13000 state of georgia
13001 appling
13003 atkinson
13005 bacon
13007 baker
13009 baldwin
13011 banks
13013 barrow
13015 bartow
13017 ben hill
13019 berrien
13021 bibb
13023 bleckley
13025 brantley
13027 brooks
13029 bryan
13031 bulloch
13033 burke
13035 butts
13037 calhoun
13039 camden
13043 candler
13045 carroll
13047 catoosa
13049 charlton
13051 chatham
13053 chattahoochee
13055 chattooga
13057 cherokee
13059 clarke
13061 clay
13063 clayton
13065 clinch
13067 cobb
13069 coffee
13071 colquitt
13073 columbia
13075 cook
13077 coweta
13079 crawford
13081 crisp
13083 dade
13085 dawson
13087 decatur
13089 de kalb
13091 dodge
13093 dooly
13095 dougherty
13097 douglas
13099 early

13101 echols
13103 effingham
13105 elbert
13107 emanuel
13109 evans
13111 fannin
13113 fayette
13115 floyd
13117 forsyth
13119 franklin
13121 fulton
13123 gilmer
13125 glascock
13127 glynn
13129 gordon
13131 grady
13133 greene
13135 gwinnett
13137 habersham
13139 hall
13141 hancock
13143 haralson
13145 harris
13147 hart
13149 heard
13151 henry
13153 houston
13155 irwin
13157 jackson
13159 jasper
13161 jeff davis
13163 jefferson
13165 jenkins
13167 johnson
13169 jones
13171 lamar
13173 lanier
13175 laurens
13177 lee
13179 liberty
13181 lincoln
13183 long
13185 lowndes
13187 lumpkin
13189 mc duffie
13191 mc intosh
13193 macon
13195 madison
13197 marion
13199 meriwether

13201 miller
13205 mitchell
13207 monroe
13209 montgomery
13211 morgan
13213 murray
13217 newton
13219 oconee
13221 oglethorpe
13223 paulding
13225 peach
13227 pickens
13229 pierce
13231 pike
13233 polk
13235 pulaski
13237 putnam
13239 quitman
13241 rabun
13243 randolph
13245 richmond
13247 rockdale
13249 schley
13251 screven
13253 seminole
13255 spalding
13257 stephens
13259 stewart
13261 sumter
13263 talbot
13265 taliaferro
13267 tattnall
13269 taylor
13271 telfair
13273 terrell
13275 thomas
13277 tift
13279 toombs
13281 towns
13283 treutlen
13285 troup
13287 turner
13289 twiggs
13291 union
13293 upson
13295 walker
13297 walton
13299 ware
13301 warren
13303 washington

13305 wayne
13307 webster
13309 wheeler
13311 white
13313 whitfield
13315 wilcox
13317 wilkes
13319 wilkinson
13321 worth
13510 columbus

15000 state of hawaii
15001 hawaii
15003 honolulu
15007 kauai
15009 maui

16000 state of idaho
16001 ada
16003 adams
16005 bannock
16007 bear lake
16009 benewah
16011 bingham
16013 blaine
16015 boise
16017 bonner
16019 bonneville
16021 boundary
16023 butte
16025 camas
16027 canyon
16029 caribou
16031 cassia
16033 clark
16035 clearwater
16037 custer
16039 elmore
16041 franklin
16043 fremont
16045 gem
16047 gooding
16049 idaho
16051 jefferson
16053 jerome
16055 kootenai
16057 latah
16059 lemhi
16061 lewis
16063 lincoln
16065 madison
16067 minidoka
16069 nez perce
16071 oneida
16073 owyhee
16075 payette
16077 power
16079 shoshone
16081 teton
16083 twin falls
16085 valley
16087 washington

17000 state of illinois
17001 adams
17003 alexander
17005 bond
17007 boone
17009 brown
17011 bureau
17013 calhoun
17015 carroll
17017 cass
17019 champaign
17021 christian
17023 clark
17025 clay
17027 clinton
17029 coles
17031 cook
17033 crawford
17035 cumberland
17037 de kalb
17039 de witt
17041 douglas
17043 du page
17045 edgar
17047 edwards
17049 effingham
17051 fayette
17053 ford
17055 franklin
17057 fulton
17059 gallatin
17061 greene
17063 grundy
17065 hamilton
17067 hancock
17069 hardin
17071 henderson
17073 henry
17075 iroquois
17077 jackson
17079 jasper
17081 jefferson
17083 jersey
17085 jo daviess
17087 johnson
17089 kane
17091 kankakee
17093 kendall
17095 knox
17097 lake

17099 la salle
17101 laurence
17103 lee
17105 livingston
17107 logan
17109 mc donough
17111 mc henry
17113 mc lean
17115 macon
17117 macoupin
17119 madison
17121 marion
17123 marshall
17125 mason
17127 massac
17129 menard
17131 mercer
17133 monroe
17135 montgomery
17137 morgan
17139 moultrie
17141 ogle
17143 peoria
17145 perry
17147 piatt
17149 pike
17151 pope
17153 pulaski
17155 putnam
17157 randolph
17159 richland
17161 rock island
17163 st clair
17165 saline
17167 sangamon
17169 schuyler
17171 scott
17173 shelby
17175 stark
17177 stephenson
17179 tazewell
17181 union
17183 vermilion
17185 wabash
17187 warren
17189 washington
17191 wayne
17193 white
17195 whiteside
17197 will
17199 williamson
17201 winnebago
17203 woodford

18000 state of indiana
18001 adams
18003 allen
18005 bartholomew
18007 benton
18009 blackford
18011 boone
18013 brown
18015 carroll
18017 cass
18019 clark
18021 clay
18023 clinton
18025 crawford
18027 daviess
18029 dearborn
18031 decatur
18033 de kalb
18035 delaware
18037 dubois
18039 elkhart
18041 fayette
18043 floyd
18045 fountain
18047 franklin
18049 fulton
18051 gibson
18053 grant
18055 greene
18057 hamilton
18059 hancock
18061 harrison
18063 hendricks
18065 henry
18067 howard
18069 huntington
18071 jackson
18073 jasper
18075 jay
18077 jefferson
18079 jennings
18081 johnson
18083 knox
18085 kosciusko
18087 lagrange
18089 lake
18091 la porte
18093 lawrence
18095 madison
18097 marion
18099 marshall
18101 martin
18103 miami
18105 monroe
18107 montgomery
18109 morgan
18111 newton
18113 noble
18115 ohio
18117 orange
18119 owen
18121 parke
18123 perry
18125 pike
18127 porter
18129 posey
18131 pulaski
18133 putnam
18135 randolph
18137 ripley
18139 rush
18141 st joseph
18143 scott
18145 shelby
18147 spencer
18149 starke
18151 steuben
18153 sullivan
18155 switzerland
18157 tippecanoe
18159 tipton
18161 union
18163 vanderburgh
18165 vermillion
18167 vigo
18169 wabash
18171 warren
18173 warrick
18175 washington
18177 wayne
18179 wells
18181 white
18183 whitley

19000 state of iowa
19001 adair
19003 adams
19005 allamakee
19007 appanoose
19009 audubon
19011 benton
19013 black hawk
19015 boone
19017 bremer
19019 buchanan
19021 buena vista
19023 butler
19025 calhoun
19027 carroll
19029 cass
19031 cedar
19033 cerro gordo
19035 cherokee
19037 chickasaw
19039 clarke
19041 clay
19043 clayton
19045 clinton
19047 crawford
19049 dallas
19051 davis
19053 decatur
19055 delaware
19057 des moines
19059 dickinson
19061 dubuque
19063 emmet
19065 fayette
19067 floyd
19069 franklin
19071 fremont
19073 greene
19075 grundy
19077 guthrie
19079 hamilton
19081 hancock
19083 hardin
19085 harrison
19087 henry
19089 howard
19091 humboldt
19093 ida
19095 iowa
19097 jackson
19099 jasper
19101 jefferson
19103 johnson
19105 jones
19107 keokuk
19109 kossuth
19111 lee
19113 linn
19115 louisa
19117 lucas
19119 lyon
19121 madison
19123 mahaska
19125 marion
19127 marshall
19129 mills
19131 mitchell
19133 monona
19135 monroe
19137 montgomery
19139 muscatine
19141 o brien
19143 osceola
19145 page
19147 palo alto
19149 plymouth
19151 pocahontas
19153 polk
19155 pottawattamie
19157 poweshiek
19159 ringgold
19161 sac
19163 scott
19165 shelby
19167 sioux
19169 story
19171 tama
19173 taylor
19175 union
19177 van buren
19179 wapello
19181 warren
19183 washington
19185 wayne
19187 webster
19189 winnebago
19191 winneshiek
19193 woodbury
19195 worth
19197 wright
20000 state of kansas
20001 allen
20003 anderson
20005 atchison
20007 barber
20009 barton
20011 bourbon
20013 brown
20015 butler
20017 chase
20019 chautauqua
20021 cherokee
20023 cheyenne
20025 clark
20027 clay
20029 cloud
20031 coffey
20033 comanche
20035 cowley
20037 crawford
20039 decatur
20041 dickinson
20043 doniphan
20045 douglas
20047 edwards
20049 elk
20051 ellis
20053 ellsworth
20055 finney
20057 ford
20059 franklin
20061 geary
20063 gove
20065 graham
20067 grant
20069 gray
20071 greeley
20073 greenwood
20075 hamilton
20077 harper
20079 harvey
20081 haskell
20083 hodgeman
20085 jackson
20087 jefferson
20089 jewell
20091 johnson
20093 kearny
20095 kingman
20097 kiowa
20099 labette
20101 lane
20103 leavenworth
20105 lincoln
20107 linn
20109 logan
20111 lyon
20113 mc pherson
20115 marion
20117 marshall
20119 meade
20121 miami
20123 mitchell
20125 montgomery
20127 morris
20129 morton
20131 nemaha
20133 neosho
20135 ness
20137 norton
20139 osage
20141 osborne
20143 ottawa
20145 pawnee
20147 phillips
20149 pottawatomie
20151 pratt
20153 rawlins
20155 reno
20157 republic
20159 rice
20161 riley
20163 rooks
20165 rush
20167 russell
20169 saline
20171 scott
20173 sedgwick
20175 seward
20177 shawnee
20179 sheridan
20181 sherman
20183 smith
20185 stafford
20187 stanton
20189 stevens
20191 sumner
20193 thomas
20195 trego
20197 wabaunsee

20199 wallace
20201 washington
20203 wichita
20205 wilson
20207 woodson
20209 wyandotte

21000 state of kentucky
21001 adair
21003 allen
21005 anderson
21007 ballard
21009 barren
21011 bath
21013 bell
21015 boone
21017 bourbon
21019 boyd
21021 boyle
21023 bracken
21025 breathitt
21027 breckinridge
21029 bullitt
21031 butler
21033 caldwell
21035 calloway
21037 campbell
21039 carlisle
21041 carroll
21043 carter
21045 casey
21047 christian
21049 clark
21051 clay
21053 clinton
21055 crittenden
21057 cumberland
21059 daviess
21061 edmonson
21063 elliott
21065 estill
21067 fayette
21069 fleming
21071 floyd
21073 franklin
21075 fulton
21077 gallatin
21079 garrard
21081 grant
21083 graves
21085 grayson
21087 green
21089 greenup
21091 hancock
21093 hardin
21095 harlan
21097 harrison

21099 hart
21101 henderson
21103 henry
21105 hickman
21107 hopkins
21109 jackson
21111 jefferson
21113 jessamine
21115 johnson
21117 kenton
21119 knott
21121 knox
21123 larue
21125 laurel
21127 lawrence
21129 lee
21131 leslie
21133 letcher
21135 lewis
21137 lincoln
21139 livingston
21141 logan
21143 lyon
21145 mc cracken
21147 mc creary
21149 mc lean
21151 madison
21153 magoffin
21155 marion
21157 marshall
21159 martin
21161 mason
21163 meade
21165 menifee
21167 mercer
21169 metcalfe
21171 monroe
21173 montgomery
21175 morgan
21177 muhlenberg
21179 nelson
21181 nicholas
21183 ohio
21185 oldham
21187 owen
21189 owsley
21191 pendleton
21193 perry
21195 pike
21197 powell

21199 pulaski
21201 robertson
21203 rockcastle
21205 rowan
21207 russell
21209 scott
21211 shelby
21213 simpson
21215 spencer
21217 taylor
21219 todd
21221 trigg
21223 trimble
21225 union
21227 warren
21229 washington
21231 wayne
21233 webster
21235 whitley
21237 wolfe
21239 woodford

22000 state of louisiana
22001 acadia
22003 allen
22005 ascension
22007 assumption
22009 avoyelles
22011 beauregard
22013 bienville
22015 bossier
22017 caddo
22019 calcasieu
22021 caldwell
22023 cameron
22025 catahoula
22027 claiborne
22029 concordia
22031 de soto
22033 east baton rouge
22035 east carroll
22037 east feliciana
22039 evangeline
22041 franklin
22043 grant
22045 iberia
22047 iberville
22049 jackson
22051 jefferson
22053 jefferson davis
22055 lafayette
22057 lafourche
22059 la salle
22061 lincoln
22063 livingston
22065 madison
22067 morehouse
22069 natchitoches
22071 orleans
22073 ouachita
22075 plaquemines
22077 pointe coupee
22079 rapides
22081 red river
22083 richland
22085 sabine
22087 st bernard
22089 st charles
22091 st helena
22093 st james
22095 st john the baptist
22097 st landry
22099 st martin
22101 st mary
22103 st tammany
22105 tangipahoa
22107 tensas
22109 terrebonne
22111 union
22113 vermilion
22115 vernon
22117 washington
22119 webster
22121 west baton rouge
22123 west carroll
22125 west feliciana
22127 winn

23000 state of maine
23001 androscoggin
23003 aroostook
23005 cumberland
23007 franklin
23009 hancock
23011 kennebec
23013 knox
23015 lincoln
23017 oxford
23019 penobscot
23021 piscataquis
23023 sagadahoc
23025 somerset
23027 waldo
23029 washington
23031 york

24000 state of maryland
24001 allegany
24003 anne arundel
24005 baltimore
24009 calvert
24011 caroline
24013 carroll
24015 cecil
24 17 charles
24019 dorchester
24021 frederick
24 23 garrett
24025 harford
24027 howard
24029 kent
24031 montgomery
24033 prince georges
24035 queen annes
24037 st marys
24039 somerset
24041 talbot
24043 washington
24045 wicomico
24047 worcester
24510 baltimore city

25000 state of massachusetts
25001 barnstable
25003 berkshire
25005 bristol
25007 dukes
25009 essex
25011 franklin
25013 hampden
25015 hampshire
25017 middlesex
25019 nantucket
25021 norfolk
25023 plymouth
25025 suffolk
25027 worcester

26000 state of michigan
26001 alcona
26003 alger
26005 allegan
26007 alpena
26009 antrim
26011 arenac
26013 baraga
26015 barry
26017 bay
26019 benzie
26021 berrien
26023 branch
26025 calhoun
26027 cass
26029 charlevoix
26031 cheboygan
26033 chippewa
26035 clare
26037 clinton
26039 crawford
26041 delta
26043 dickinson
26045 eaton
26047 emmet
26049 genesee
26051 gladwin
26053 gogebic
26055 grand traverse
26057 gratiot
26059 hillsdale
26061 houghton
26063 huron
26065 ingham
26067 ionia
26069 iosco
26071 iron
26073 isabella
26075 jackson
26077 kalamazoo
26079 kalkaska
26081 kent
26083 keweenaw
26085 lake
26087 lapeer
26089 leelanau
26091 lenawee
26093 livingston
26095 luce
26097 mackinac
26099 macomb
26101 manistee
26103 marquette
26105 mason
26107 mecosta
26109 menominee
26111 midland
26113 missaukee
26115 monroe
26117 montcalm
26119 montmorency
26121 muskegon
26123 newaygo
26125 oakland
26127 oceana
26129 ogemaw
26131 ontonagon
26133 osceola
26135 oscoda
26137 otsego
26139 ottawa
26141 presque isle
26143 roscommon
26145 saginaw
26147 st clair
26149 st joseph
26151 sanilac
26153 schoolcraft
26155 shiawassee
26157 tuscola
26159 van buren
26161 washtenaw
26163 wayne
26165 wexford

27000 state of minnesota
27001 aitkin
27003 anoka
27005 becker
27007 beltrami
27009 benton
27011 big stone
27013 blue earth
27015 brown
27017 carlton
27019 carver
27021 cass
27023 chippewa
27025 chisago
27027 clay
27029 clearwater
27031 cook
27033 cottonwood
27035 crow wing
27037 dakota
27039 dodge
27041 douglas
27043 faribault
27045 fillmore
27047 freeborn
27049 goodhue
27051 grant
27053 hennepin
27055 houston
27057 hubbard
27059 isanti
27061 itasca
27063 jackson
27065 kanabec
27067 kandiyohi
27069 kittson
27071 koochiching
27073 lac qui parle
27075 lake
27077 lake of the woods
27079 le sueur
27081 lincoln
27083 lyon
27085 mc leod
27087 mahnomen
27089 marshall
27091 martin
27093 meeker
27095 mille lacs
27097 morrison

27099 mower
27101 murray
27103 nicollet
27105 nobles
27107 norman
27109 olmsted
27111 otter tail
27113 pennington
27115 pine
27117 pipestone
27119 polk
27121 pope
27123 ramsey
27125 red lake
27127 redwood
27129 renville
27131 rice
27133 rock
27135 roseau
27137 st louis
27139 scott
27141 sherburne
27143 sibley
27145 stearns
27147 steele
27149 stevens
27151 swift
27153 todd
27155 traverse
27157 wabasha
27159 wadena
27161 waseca
27163 washington
27165 watonwan
27167 wilkin
27169 winona
27171 wright
27173 yellow medicine

28000 state of mississippi
28001 adams
28003 alcorn
28005 amite
28007 attala
28009 benton
28011 bolivar
28013 calhoun
28015 carroll
28017 chickasaw
28019 choctaw
28021 claiborne
28023 clarke
28025 clay
28027 coahoma
28029 copiah
28031 covington
28033 de soto
28035 forrest
28037 franklin
28039 george
28041 greene
28043 grenada
28045 hancock
28047 harrison
28049 hinds
28051 holmes
28053 humphreys
28055 issaquena
28057 itawamba
28059 jackson
28061 jasper
28063 jefferson
28065 jefferson davis
28067 jones
28069 kemper
28071 lafayette
28073 lamar
28075 lauderdale
28077 lawrence
28079 leake
28081 lee
28083 leflore
28085 lincoln
28087 lowndes
28089 madison
28091 marion
28093 marshall
28095 monroe
28097 montgomery

28099 neshoba
28101 newton
28103 noxubee
28105 oktibbeha
28107 panola
28109 pearl river
28111 perry
28113 pike
28115 pontotoc
28117 prentiss
28119 quitman
28121 rankin
28123 scott
28125 sharkey
28127 simpson
28129 smith
28131 stone
28133 sunflower
28135 tallahatchie
28137 tate
28139 tippah
28141 tishomingo
28143 tunica
28145 union
28147 walthall
28149 warren
28151 washington
28153 wayne
28155 webster
28157 wilkinson
28159 winston
28161 yalobusha
28163 yazoo

29000 state of missouri
29001 adair
29003 andrew
29005 atchison
29007 auorain
29009 barry
29011 tarton
29013 bates
29015 tenton
29017 bollinger
29019 boone
29021 buchanan
29023 butler
29025 caldwell
29027 callaway
29029 camden
29031 cape girardeau
29033 carroll
29035 carter
29037 cass
29039 cedar
29041 chariton
29043 christian
29045 clark
29047 clay
29049 clinton
29051 cole
29053 cooper
29055 crawford
29057 dade
29059 dallas
29061 daviess
29063 de kalb
29065 dent
29067 douglas
29069 dunklin
29071 franklin
29073 gasconade
29075 gentry
29077 greene
29079 grundy
29081 harrison
29083 henry
29085 hickory
29087 holt
29089 howard
29091 howell
29093 iron
29095 jackson
29097 jasper

29099 jefferson
29101 johnson
29103 knox
29105 laclede
29107 lafayette
29109 lawrence
29111 lewis
29113 lincoln
29115 linn
29117 livingston
29119 mc donald
29121 macon
29123 madison
29125 maries
29127 marion
29129 mercer
29131 miller
29133 mississippi
29135 moniteau
29137 monroe
29139 montgomery
29141 morgan
29143 new madrid
29145 newton
29147 nodaway
29149 oregon
29151 osage
29153 ozark
29155 pemiscot
29157 perry
29159 pettis
29161 phelps
29163 pike
29165 platte
29167 polk
29169 pulaski
29171 putnam
29173 ralls
29175 randolph
29177 ray
29179 reynolds
29181 ripley
29183 st charles
29185 st clair
29187 st francois
29189 st louis
29193 ste genevieve
29195 saline
29197 schuyler
29199 scotland

29201 scott
29203 shannon
29205 shelby
29207 stoddard
29209 stone
29211 sullivan
29213 taney
29215 texas
29217 vernon
29219 warren
29221 washington
29223 wayne
29225 webster
29227 worth
29229 wright
29510 st louis city

30000 state of montana
30001 beaverhead
30003 big horn
30005 blaine
30007 broadwater
30009 carbon
30011 carter
30013 cascade
30015 chouteau
30017 custer
30019 daniels
30021 dawson
30023 deer lodge
30025 fallon
30027 fergus
30029 flathead
30031 gallatin
30033 garfield
30035 glacier
30037 golden valley
30039 granite
30041 hill
30043 jefferson
30045 judith basin
30047 lake
30049 lewis and clark
30051 liberty
30053 lincoln
30055 mc cone
30057 madison
30059 meagher
30061 mineral
30063 missoula
30065 musselshell
30069 petroleum
30071 phillips
30073 pondera
30075 powder river
30077 powell
30079 prairie
30081 ravalli
30083 richland
30085 roosevelt
30087 rosebud
30089 sanders
30091 sheridan
30093 silver bow
30095 stillwater
30097 sweet grass
30099 teton

30101 toole
30103 treasure
30105 valley
30107 wheatland
30109 wibaux
30111 yellowstone
30901 park

31000 state of nebraska
31001 adams
31003 antelope
31005 arthur
31007 banner
31009 blaine
31011 boone
31013 box butte
31015 boyd
31017 brown
31019 buffalo
31021 burt
31023 butler
31025 cass
31027 cedar
31029 chase
31031 cherry
31033 cheyenne
31035 clay
31037 colfax
31039 cuming
31041 custer
31043 dakota
31045 dawes
31047 dawson
31049 deuel
31051 dixon
31053 dodge
31055 douglas
31057 dundy
31059 fillmore
31061 franklin
31063 frontier
31065 furnas
31067 gage
31069 garden
31071 garfield
31073 gosper
31075 grant
31077 greeley
31079 hall
31081 hamilton
31083 harlan
31085 hayes
31087 hitchcock
31089 holt
31091 hooker
31093 howard
31095 jefferson
31097 johnson
31099 kearney
31101 keith
31103 keya paha
31105 kimball
31107 knox
31109 lancaster
31111 lincoln
31113 logan
31115 loup
31117 mc pherson
31119 madison
31121 merrick
31123 morrill
31125 nance
31127 nemaha
31129 nuckolls
31131 otoe
31133 pawnee
31135 perkins
31137 phelps
31139 pierce
31141 platte
31143 polk
31145 red willow
31147 richardson
31149 rock
31151 saline
31153 sarpy
31155 saunders
31157 scotts bluff
31159 seward
31161 sheridan
31163 sherman
31165 sioux
31167 stanton
31169 thayer
31171 thomas
31173 thurston
31175 valley
31177 washington
31179 wayne
31181 webster
31183 wheeler
31185 york
32000 state of nevada
32001 churchill
32003 clark
32005 douglas
32007 elko
32009 esmeralda
32011 eureka
32013 humboldt
32015 lander
32017 lincoln
32019 lyon
32021 mineral
32023 nye
32027 pershing
32029 storey
32031 washoe
32033 white pine
32510 carson city city
33000 state of new hampshire
33001 belknap
33003 carroll
33005 cheshire
33007 coos
33009 grafton
33011 hillsborough
33013 merrimack
33015 rockingham
33017 strafford
33019 sullivan

34000 state of new jersey
34001 atlantic
34003 bergen
34005 burlington
34007 camden
34009 cape may
34011 cumberland
34013 essex
34015 gloucester
34017 hudson
34019 hunterdon
34021 mercer
34023 middlesex
34025 monmouth
34027 morris
34029 ocean
34031 passaic
34033 salem
34035 somerset
34037 sussex
34039 union
34041 warren

35000 state of new mexico
35001 bernalillo
35003 catron
35005 chaves
35007 colfax
35009 curry
35011 de baca
35013 dona ana
35015 eddy
35017 grant
35019 guadalupe
35021 harding
35023 hidalgo
35025 lea
35027 lincoln
35029 los alamos
35029 luna
35031 mc kinley
35033 mora
35035 otero
35037 quay
35039 rio arriba
35041 roosevelt
35043 sandoval
35045 san juan
35047 san miguel
35049 santa fe
35051 sierra
35053 socorro
35055 taos
35057 torrance
35059 union
35061 valencia

36000 state of new york
36001 albany
36003 allegany
36005 bronx
36007 broome
36009 cattaraugus
36011 cayuga
36013 chautauqua
36015 chemung
36017 chenango
36019 clinton
36021 columbia
36023 cortland
36025 delaware
36027 dutchess
36029 erie
36031 essex
36033 franklin
36035 fulton
36037 genesee
36039 greene
36041 hamilton
36043 herkimer
36045 jefferson
36047 kings
36049 lewis
36051 livingston
36053 madison
36055 monroe
36057 montgomery
36059 nassau
36061 new york
36063 niagara
36065 oneida
36067 onondaga
36069 ontario
36071 orange
36073 orleans
36075 oswego
36077 otsego
36079 putnam
36081 queens
36083 rensselaer
36085 richmond
36087 rockland
36089 st lawrence
36091 saratoga
36093 schenectady
36095 schoharie
36097 schuyler
36099 seneca
36101 steuben
36103 suffolk
36105 sullivan
36107 tioga
36109 tompkins
36111 ulster
36113 warren
36115 washington
36117 wayne
36119 westchester
36121 wyoming
36123 yates

37000 state of north carolina
37001 alamance
37003 alexander
37005 alleghany
37007 anson
37009 ashe
37011 avery
37013 beaufort
37015 bertie
37017 bladen
37019 brunswick
37021 buncombe
37023 burke
37025 cabarrus
37027 caldwell
37029 camden
37031 carteret
37033 caswell
37035 catawba
37037 chatham
37039 cherokee
37041 chowan
37043 clay
37045 cleveland
37047 columbus
37049 craven
37051 cumberland
37053 currituck
37055 dare
37057 davidson
37059 davie
37061 duplin
37063 durham
37065 edgecombe
37067 forsyth
37069 franklin
37071 gaston
37073 gates
37075 graham
37077 granville
37079 greene
37081 guilford
37083 halifax
37085 harnett
37087 haywood
37089 henderson
37091 hertford
37093 hoke
37095 hyde
37097 iredell
37099 jackson
37101 johnston
37103 jones
37105 lee
37107 lenoir
37109 lincoln
37111 mc dowell
37113 macon
37115 madison
37117 martin
37119 mecklenburg
37121 mitchell
37123 montgomery
37125 moore
37127 nash
37129 new hanover
37131 northampton
37133 onslow
37135 orange
37137 pamlico
37139 pasquotank
37141 pender
37143 perquimans
37145 person
37147 pitt
37149 polk
37151 randolph
37153 richmond
37155 robeson
37157 rockingham
37159 rowan
37161 rutherford
37163 sampson
37165 scotland
37167 stanly
37169 stokes
37171 surry
37173 swain
37175 transylvania
37177 tyrrell
37179 union
37181 vance
37183 wake
37185 warren
37187 washington
37189 watauga
37191 wayne
37193 wilkes
37195 wilson
37197 yadkin
37199 yancey

38000 state of north dakota
38001 adams
38003 barnes
38005 benson
38007 billings
38009 bottineau
38011 bowman
38013 burke
38015 burleigh
38017 cass
38019 cavalier
38021 dickey
38023 divide
38025 dunn
38027 eddy
38029 emmons
38031 foster
38033 golden valley
38035 grand forks
38037 grant
38039 griggs
38041 hettinger
38043 kidder
38045 la moure
38047 logan
38049 mc henry
38051 mc intosh
38053 mc kenzie
38055 mc lean
38057 mercer
38059 morton
38061 mountrail
38063 nelson
38065 oliver
38067 pembina
38069 pierce
38071 ramsey
38073 ransom
38075 renville
38077 richland
38079 rolette
38081 sargent
38083 sheridan
38085 sioux
38087 slope
38089 stark
38091 steele
38093 stutsman
38095 towner
38097 traill

38099 walsh
38101 ward
38103 wells
38105 williams

39000 state of ohio
39001 adams
39003 allen
39005 ashland
39007 ashtabula
39009 athens
39011 auglaize
39013 belmont
39015 brown
39017 butler
39019 carroll
39021 champaign
39023 clark
39025 clermont
39027 clinton
39029 columbiana
39031 coshocton
39033 crawford
39035 cuyahoga
39037 darke
39039 defiance
39041 delaware
39043 erie
39045 fairfield
39047 fayette
39049 franklin
39051 fulton
39053 gallia
39055 geauga
39057 greene
39059 guernsey
39061 hamilton
39063 hancock
39065 hardin
39067 harrison
39069 henry
39071 highland
39073 hocking
39075 holmes
39077 huron
39079 jackson
39081 jefferson
39083 knox
39085 lake
39087 lawrence
39089 licking
39091 logan
39093 lorain
39095 lucas
39097 madison

39099 mahoning
39101 marion
39103 medina
39105 meigs
39107 mercer
39109 miami
39111 monroe
39113 montgomery
39115 morgan
39117 morrow
39119 muskingum
39121 noble
39123 ottawa
39125 paulding
39127 perry
39129 pickaway
39131 pike
39133 portage
39135 preble
39137 putnam
39139 richland
39141 ross
39143 sandusky
39145 scioto
39147 seneca
39149 shelby
39151 stark
39153 summit
39155 trumbull
39157 tuscarawas
39159 union
39161 van wert
39163 vinton
39165 warren
39167 washington
39169 wayne
39171 williams
39173 wood
39175 wyandot

40000 state of oklahoma
40001 adair
40003 alfalfa
40005 atoka
40007 beaver
40009 beckham
40011 blaine
40013 bryan
40015 caddo
40017 canadian
40019 carter
40021 cherokee
40023 choctaw
40025 cimarron
40027 cleveland
40029 coal
40031 comanche
40033 cotton
40035 craig
40037 creek
40039 custer
40041 delaware
40043 dewey
40045 ellis
40047 garfield
40049 garvin
40051 grady
40053 grant
40055 greer
40057 harmon
40059 harper
40061 haskell
40063 hughes
40065 jackson
40067 jefferson
40069 johnston
40071 kay
40073 kingfisher
40075 kiowa
40077 latimer
40079 le flore
40081 lincoln
40083 logan
40085 love
40087 mc clain
40089 mc curtain
40091 mc intosh
40093 major
40095 marshall
40097 mayes

40099 murray
40101 muskogee
40103 noble
40105 nowata
40107 okfuskee
40109 oklahoma
40111 okmulgee
40113 osage
40115 ottawa
40117 pawnee
40119 payne
40121 pittsburg
40123 pontotoc
40125 pottawatomie
40127 pushmataha
40129 roger mills
40131 rogers
40133 seminole
40135 sequoyah
40137 stephens
40139 texas
40141 tillman
40143 tulsa
40145 wagoner
40147 washington
40149 washita
40151 woods
40153 woodward

41000 state of oregon
41001 baker
41003 benton
41005 clackamas
41007 clatsop
41009 columbia
41011 coos
41013 crook
41015 curry
41017 deschutes
41019 douglas
41021 gilliam
41023 grant
41025 harney
41027 hood river
41029 jackson
41031 jefferson
41033 josephine
41035 klamath
41037 lake
41039 lane
41041 lincoln
41043 linn
41045 malheur
41047 marion
41049 morrow
41051 multnomah
41053 polk
41055 sherman
41057 tillamook
41059 umatilla
41061 union
41063 wallowa
41065 wasco
41067 washington
41069 wheeler
41071 yamhill

42000 state of pennsylvania
42001 adams
42003 allegheny
42005 armstrong
42007 beaver
42009 bedford
42011 berks
42013 blair
42015 bradford
42017 bucks
42019 butler
42021 cambria
42023 cameron
42025 carbon
42027 centre
42029 chester
42031 clarion
42033 clearfield
42035 clinton
42037 columbia
42039 crawford
42041 cumberland
42043 dauphin
42045 delaware
42047 elk
42049 erie
42051 fayette
42053 forest
42055 franklin
42057 fulton
42059 greene
42061 huntingdon
42063 indiana
42065 jefferson
42067 juniata
42069 lackawanna
42071 lancaster
42073 lawrence
42075 lebanon
42077 lehigh
42079 luzerne
42081 lycoming
42083 mc kean
42085 mercer
42087 mifflin
42089 monroe
42091 montgomery
42093 montour
42095 northampton
42097 northumberland

42099 perry
42101 philadelphia
42103 pike
42105 potter
42107 schuylkill
42109 snyder
42111 somerset
42113 sullivan
42115 susquehanna
42117 tioga
42119 union
42121 venango
42123 warren
42125 washington
42127 wayne
42129 westmoreland
42131 wyoming
42133 york

44000 state of rhode island
44001 bristol
44003 kent
44005 newport
44007 providence
44009 washington

45000 state of south carolina
45001 abbeville
45003 aiken
45005 allendale
45007 anderson
45009 bamberg
45011 barnwell
45013 beaufort
45015 berkeley
45017 calhoun
45019 charleston
45021 cherokee
45023 chester
45025 chesterfield
45027 clarendon
45029 colleton
45031 darlington
45033 dillon
45035 dorchester
45037 edgefield
45039 fairfield
45041 florence
45043 georgetown
45045 greenville
45047 greenwood
45049 hampton
45051 horry
45053 jasper
45055 kershaw
45057 lancaster
45059 laurens
45061 lee
45063 lexington
45065 mc cormick
45067 marion
45069 marlboro
45071 newberry
45073 oconee
45075 orangeburg
45077 pickens
45079 richland
45081 saluda
45083 spartanburg
45085 sumter
45087 union
45089 williamsburg
45091 york

46000 state of south dakota
46003 aurora
46005 beadle
46007 bennett
46009 bon homme
46011 brookings
46013 brown
46015 brule
46017 buffalo
46019 butte
46021 campbell
46023 charles mix
46025 clark
46027 clay
46029 codington
46031 corson
46033 custer
46035 davison
46037 day
46039 deuel
46041 dewey
46043 douglas
46045 edmunds
46047 fall river
46049 faulk
46051 grant
46053 gregory
46055 haakon
46057 hamlin
46059 hand
46061 hanson
46063 harding
46065 hughes
46067 hutchinson
46069 hyde
46071 jackson
46073 jerauld
46075 jones
46077 kingsbury
46079 lake
46081 lawrence
46083 lincoln
46085 lyman
46087 mc cook
46089 mc pherson
46091 marshall
46093 meade
46095 mellette
46097 miner
46099 minnehaha

46101 moody
46103 pennington
46105 perkins
46107 potter
46109 roberts
46111 sanborn
46113 shannon
46115 spink
46117 stanley
46119 sully
46121 todd
46123 tripp
46125 turner
46127 union
46129 walworth
46131 washabaugh
46135 yankton
46137 ziebach

47000 state of tennessee
47001 anderson
47003 bedford
47005 benton
47007 bledsoe
47009 blount
47011 bradley
47013 campbell
47015 cannon
47017 carroll
47019 carter
47021 cheatham
47023 chester
47025 claiborne
47027 clay
47029 cocke
47031 coffee
47033 crockett
47035 cumberland
47037 davidson
47039 decatur
47041 de kalb
47043 dickson
47045 dyer
47047 fayette
47049 fentress
47051 franklin
47053 gibson
47055 giles
47057 grainger
47059 greene
47061 grundy
47063 hamblen
47065 hamilton
47067 hancock
47069 hardeman
47071 hardin
47073 hawkins
47075 haywood
47077 henderson
47079 henry
47081 hickman
47083 houston
47085 humphreys
47087 jackson
47089 jefferson
47091 johnson
47093 knox
47095 lake
47097 lauderdale
47099 lawrence
47101 lewis
47103 lincoln
47105 loudon
47107 mc minn
47109 mc nairy
47111 macon
47113 madison
47115 marion
47117 marshall
47119 maury
47121 meigs
47123 monroe
47125 montgomery
47127 moore
47129 morgan
47131 obion
47133 overton
47135 perry
47137 pickett
47139 polk
47141 putnam
47143 rhea
47145 roane
47147 robertson
47149 rutherford
47151 scott
47153 sequatchie
47155 sevier
47157 shelby
47159 smith
47161 stewart
47163 sullivan
47165 sumner
47167 tipton
47169 trousdale
47171 unicoi
47173 union
47175 van buren
47177 warren
47179 washington
47181 wayne
47183 weakley
47185 white
47187 williamson
47189 wilson

48000 state of texas
48001 anderson
48003 andrews
48005 angelina
48007 aransas
48009 archer
48011 armstrong
48013 atascosa
48015 austin
48017 bailey
48019 bandera
48021 bastrop
48023 baylor
48025 bee
48027 bell
48029 bexar
48031 blanco
48033 borden
48035 bosque
48037 bowie
48039 brazoria
48041 brazos
48043 brewster
48045 briscoe
48047 brooks
48049 brown
48051 burleson
48053 burnet
48055 caldwell
48057 calhoun
48059 callahan
48061 cameron
48063 camp
48065 carson
48067 cass
48069 castro
48071 chambers
48073 cherokee
48075 childress
48077 clay
48079 cochran
48081 coke
48083 coleman
48085 collin
48087 collingsworth
48089 colorado
48091 comal
48093 comanche
48095 concho
48097 cooke
48099 coryell
48101 cottle
48103 crane
48105 crockett
48107 crosby
48109 culberson
48111 dallam
48113 dallas
48115 dawson
48117 deaf smith
48119 delta
48121 denton
48123 de witt
48125 dickens
48127 dimmit
48129 donley
48131 duval
48133 eastland
48135 ector
48137 edwards
48139 ellis
48141 el paso
48143 erath
48145 falls
48147 fannin
48149 fayette
48151 fisher
48153 floyd
48155 foard
48157 fort bend
48159 franklin
48161 freestone
48163 frio
48165 gaines
48167 galveston
48169 garza
48171 gillespie
48173 glasscock
48175 goliad
48177 gonzales
48179 gray
48181 grayson
48183 gregg
48185 grimes
48187 guadalupe
48189 hale
48191 hall
48193 hamilton
48195 hansford
48197 hardeman

48199 hardin
48201 harris
48203 harrison
48205 hartley
48207 haskell
48209 hays
48211 hemphill
48213 henderson
48215 hidalgo
48217 hill
48219 hockley
48221 hood
48223 hopkins
48225 houston
48227 howard
48229 hudspeth
48231 hunt
48233 hutchinson
48235 irion
48237 jack
48239 jackson
48241 jasper
48243 jeff davis
48245 jefferson
48247 jim hogg
48249 jim wells
48251 johnson
48253 jones
48255 karnes
48257 kaufman
48259 kendall
48261 kenedy
48263 kent
48265 kerr
48267 kimble
48269 king
48271 kinney
48273 kleberg
48275 knox
48277 lamar
48279 lamb
48281 lampasas
48283 la salle
48285 lavaca
48287 lee
48289 leon
48291 liberty
48293 limestone
48295 lipscomb
48297 live oak
48299 llano
48301 loving
48303 lubbock
48305 lynn
48307 mc culloch
48309 mc lennan
48311 mc mullen
48313 madison
48315 marion
48317 martin
48319 mason
48321 matagorda
48323 maverick
48325 medina
48327 menard
48329 midland
48331 milam
48333 mills
48335 mitchell
48337 montague
48339 montgomery
48341 moore
48343 morris
48345 motley
48347 nacogdoches
48349 navarro
48351 newton
48353 nolan
48355 nueces
48357 ochiltree
48359 oldham
48361 orange
48363 palo pinto
48365 panola
48367 parker
48369 parmer
48371 pecos
48373 polk
48375 potter
48377 presidio
48379 rains
48381 randall
48383 reagan
48385 real
48387 red river
48389 reeves
48391 refugio
48393 roberts
48395 robertson
48397 rockwall
48399 runnels
48401 rusk
48403 sabine
48405 san augustine
48407 san jacinto
48409 san patricio
48411 san saba
48413 schleicher
48415 scurry
48417 shackelford
48419 shelby
48421 sherman
48423 smith
48425 somervell
48427 starr
48429 stephens
48431 sterling
48433 stonewall
48435 sutton
48437 swisher
48439 tarrant
48441 taylor
48443 terrell
48445 terry
48447 throckmorton
48449 titus
48451 tom green
48453 travis
48455 trinity
48457 tyler
48459 upshur
48461 upton
48463 uvalde
48465 val verde
48467 van zandt
48469 victoria
48471 walker
48473 waller
48475 ward
48477 washington
48479 webb
48481 wharton
48483 wheeler
48485 wichita
48487 wilbarger
48489 willacy
48491 williamson
48493 wilson
48495 winkler
48497 wise
48499 wood
48501 yoakum
48503 young
48505 zapata
48507 zavala

49000 state of utah
49001 beaver
49003 box elder
49005 cache
49007 carbon
49009 daggett
49011 davis
49013 duchesne
49015 emery
49017 garfield
49019 grand
49021 iron
49023 juab
49025 kane
49027 millard
49029 morgan
49031 piute
49033 rich
49035 salt lake
49037 san juan
49039 sanpete
49041 sevier
49043 summit
49045 tooele
49047 uintah
49049 utah
49051 wasatch
49053 washington
49055 wayne
49057 weber

50000 state of vermont
50001 addison
50003 bennington
50005 caledonia
50007 chittenden
50009 essex
50011 franklin
50013 grand isle
50015 lamoille
50017 orange
50019 orleans
50021 rutland
50023 washington
50025 windham
50027 windsor

51000 state of virginia
51001 accomack
51003 albemarle
51005 alleghany
51007 amelia
51009 amherst
51011 appomattox
51013 arlington
51015 augusta
51017 bath
51019 bedford
51021 bland
51023 botetourt
51025 brunswick
51027 buchanan
51029 buckingham
51031 campbell
51033 caroline
51035 carroll
51036 charles city
51037 charlotte
51041 chesterfield
51043 clarke
51045 craig
51047 culpeper
51049 cumberland
51051 dickenson
51053 dinwiddie
51057 essex
51059 fairfax
51061 fauquier
51063 floyd
51065 fluvanna
51067 franklin
51069 frederick
51071 giles
51073 gloucester
51075 goochland
51077 grayson
51079 greene
51081 greensville
51083 halifax
51085 hanover
51087 henrico
51089 henry
51091 highland
51093 isle of wight
51095 james city
51097 king and queen
51099 king george

51101 king william
51103 lancaster
51105 lee
51107 loudoun
51109 louisa
51111 lunenberg
51113 madison
51115 matheus
51117 mecklenburg
51119 middlesex
51121 montuomery
51125 nelson
51127 new kent
51131 northampton
51133 northumberland
51135 nottoway
51137 orange
51139 page
51141 patrick
51143 pittsylvania
51145 powhatan
51147 prince edward
51149 prince george
51153 prince william
51155 pulaski
51157 rappahannock
51159 richmond
51161 roanoke
51163 rockbridge
51165 rockingham
51167 russell
51169 scott
51171 shenandoah
51173 smyth
51175 southampton
51177 spotsylvania
51179 stafford
51181 surry
51183 sussex
51185 tazewell
51187 warren
51191 washington
51193 westmoreland
51195 wise
51197 wythe
51199 york
51510 alexandria city
51515 bedford city
51520 bristol city
51530 buena vista city

51540 charlottesville city
51550 chesapeake city
51560 clifton forge city
51570 colonial heights city
51580 covington city
51590 danville city
51595 emporia city
51600 fairfax city
51610 falls church city
51620 franklin city
51630 fredericksburg city
51640 galax city
51650 hampton city
51660 harrisonburg city
51670 hopewell city
51678 lexington city
51680 lynchburg city
51690 martinsville city
51700 newport news city
51710 norfolk city
51720 norton city
51730 petersburg city
51740 portsmouth city
51750 radford city
51760 richmond city
51770 roanoke city
51775 salem city
51780 south boston city
51790 staunton city
51800 suffolk city
51810 virginia beach city
51820 waynesboro city
51830 williamsburg city
51840 winchester city

53000 state of washington
53001 adams
53003 asotin
53005 benton
53007 chelan
53009 clallam
53011 clark
53013 columbia
53015 cowlitz
53017 douglas
53019 ferry
53021 franklin
53023 garfield
53025 grant
53027 grays harbor
53029 island
53031 jefferson
53033 king
53035 kitsap
53037 kittitas
53039 klickitat
53041 lewis
53043 lincoln
53045 mason
53047 okanogan
53049 pacific
53051 pend oreille
53053 pierce
53055 san juan
53057 skagit
53059 skamania
53061 snohomish
53063 spokane
53065 stevens
53067 thurston
53069 wahkiakum
53071 walla walla
53073 whatcom
53075 whitman
53077 yakima

54000 state of west virginia
54001 barbour
54003 berkeley
54005 boone
54007 braxton
54009 brooke
54011 cabell
54013 calhoun
54015 clay
54017 doddridge
54019 fayette
54021 gilmer
54023 grant
54025 greenbrier
54027 hampshire
54029 hancock
54031 hardy
54033 harrison
54035 jackson
54037 jefferson
54039 kanawha
54041 lewis
54043 lincoln
54045 logan
54047 mc dowell
54049 marion
54051 marshall
54053 mason
54055 mercer
54057 mineral
54059 mingo
54061 monongalia
54063 monroe
54065 morgan
54067 nicholas
54069 ohio
54071 pendleton
54073 pleasants
54075 pocahontas
54077 preston
54079 putnam
54081 raleigh
54083 randolph
54085 ritchie
54087 roane
54089 summers
54091 taylor
54093 tucker
54095 tyler
54097 upshur
54099 wayne
54101 webster
54103 wetzel
54105 wirt
54107 wood
54109 wyoming

55000 state of wisconsin
55001 adams
55003 ashland
55005 barron
55007 bayfield
55009 brown
55011 buffalo
55013 burnett
55015 calumet
55017 chippewa
55019 clark
55021 columbia
55023 crawford
55025 dane
55027 dodge
55029 door
55031 douglas
55033 dunn
55035 eau claire
55037 florence
55039 fond du lac
55041 forest
55043 grant
55045 green
55047 green lake
55049 iowa
55051 iron
55053 jackson
55055 jefferson
55057 juneau
55059 kenosha
55061 kewaunee
55063 la crosse
55065 lafayette
55067 langlade
55069 lincoln
55071 manitowoc
55073 marathon
55075 marinette
55077 marquette
55079 milwaukee
55081 monroe
55083 oconto
55085 oneida
55087 outagamie
55089 ozaukee
55091 pepin
55093 pierce
55095 polk
55097 portage
55099 price
55101 racine
55103 richland
55105 rock
55107 rusk
55109 st croix
55111 sauk
55113 sawyer
55117 sheboygan
55119 taylor
55121 trempealeau
55123 vernon
55125 vilas
55127 walworth
55129 washburn
55131 washington
55133 waukesha
55135 waupaca
55137 waushara
55139 winnebago
55141 wood
55901 shawano menominee
56000 state of wyoming
56001 albany
56003 big horn
56005 campbell
56007 carbon
56009 converse
56011 crook
56013 fremont
56015 goshen
56017 hot springs
56019 johnson
56021 laramie
56023 lincoln
56025 natrona
56027 niobrara
56029 park
56031 platte
56033 sheridan
56035 sublette
56037 sweetwater
56039 teton
56041 uinta
56043 washakie
56045 weston

APPENDIX D: REGIONS FOR SELECTED MILITARY INSTALLATIONS

andrews afb
- 11001 district of columbia, dc
- 24003 anne arundel, md
- 24009 calvert, md
- 24017 charles, md
- 24027 howard, md
- 24031 montgomery, md
- 24033 prince georges, md
- 24037 st marys, md
- 51013 arlington, va
- 51059 fairfax, va
- 51153 prince william, va
- 51510 alexandria city, va
- 51600 fairfax city, va
- 51610 falls church city, va

fort belvoir
- 11001 district of columbia, dc
- 24003 anne arundel, md
- 24009 calvert, md
- 24017 charles, md
- 24027 howard, md
- 24033 prince georges, md
- 51013 arlington, va
- 51059 fairfax, va
- 51061 fauquier, va
- 51099 king george, va
- 51107 loudoun, va
- 51153 prince william, va
- 51179 stafford, va
- 51510 alexandria city, va
- 51600 fairfax city, va
- 51610 falls church city, va

fort benning
- 01005 barbour, al
- 01081 lee, al
- 01087 macon, al
- 01113 russell, al
- 13053 chattahoochee, ga
- 13145 harris, ga
- 13197 marion, ga
- 13259 stewart, ga
- 13263 talbot, ga
- 13307 webster, ga
- 13510 columbus, ga

fort bliss
- 35013 dona ana, nm
- 35035 otero, nm
- 48141 el paso, tx
- 48229 hudspeth, tx

bob
- 06053 monterey, ca
- 06069 san benito, ca
- 06087 santa cruz, ca

fort bragg
- 37017 bladen, nc
- 37051 cumberland, nc
- 37085 harnett, nc
- 37093 hoke, nc
- 37101 johnston, nc
- 37105 lee, nc
- 37125 moore, nc
- 37155 robeson, nc
- 37163 sampson, nc
- 37165 scotland, nc

fort campbell
- 21047 christian, ky
- 21141 logan, ky
- 21219 todd, ky
- 21221 trigg, ky
- 47021 cheatham, tn
- 47043 dickson, tn
- 47083 houston, tn
- 47125 montgomery, tn
- 47147 robertson, tn
- 47161 stewart, tn

carlisle barracks
- 42001 adams, pa
- 42041 cumberland, pa
- 42043 dauphin, pa
- 42055 franklin, pa
- 42061 huntingdon, pa
- 42067 juniata, pa
- 42071 lancaster, pa
- 42099 perry, pa
- 42133 york, pa

cerl
champaign
demo, test
- 17019 champaign, il

fort chaffee
- 05033 crawford, ar
- 05047 franklin, ar
- 05083 logan, ar
- 05127 scott, ar
- 05131 sebastian, ar
- 05149 yell, ar
- 40001 adair, ok
- 40061 haskell, ok
- 40079 le flore, ok

craig afb
- 01001 autauga, al
- 01013 butler, al
- 01021 chilton, al
- 01047 dallas, al
- 01085 lowndes, al
- 01091 marengo, al
- 01101 montgomery, al
- 01105 perry, al
- 01131 wilcox, al

fort devens
- 25009 essex, ma
- 25017 middlesex, ma
- 25021 norfolk, ma
- 25023 plymouth, ma
- 25025 suffolk, ma
- 25027 worcester, ma
- 33011 hillsborough, nh
- 33015 rockingham, nh

fort dix
- 34001 atlantic, nj
- 34005 burlington, nj
- 34007 camden, nj
- 34015 gloucester, nj
- 34021 mercer, nj
- 34023 middlesex, nj
- 34025 monmouth, nj
- 34029 ocean, nj
- 42017 bucks, pa
- 42091 montgomery, pa
- 42101 philadelphia, pa

fort drum
- 36045 jefferson, ny
- 36049 lewis, ny
- 36089 st lawrence, ny

fort eustis
- 51036 charles city, va
- 51073 gloucester, va
- 51093 isle of wight, va
- 51095 james city, va
- 51097 king and queen, va
- 51115 mathews, va
- 51119 middlesex, va
- 51127 new kent, va
- 51149 prince george, va
- 51175 southampton, va
- 51181 surry, va
- 51183 sussex, va
- 51199 york, va
- 51550 chesapeake city, va
- 51650 hampton city, va
- 51700 newport news city, va

fort eustis (cont)
- 51710 norfolk city, va
- 51740 portsmouth city, va
- 51830 williamsburg city, va

fort gordon
- 13033 burke, ga
- 13073 columbia, ga
- 13125 glascock, ga
- 13163 jefferson, ga
- 13181 lincoln, ga
- 13189 mc duffie, ga
- 13245 richmond, ga
- 13301 warren, ga
- 45003 aiken, sc
- 45011 barnwell, sc
- 45037 edgefield, sc
- 45065 mc cormick, sc

fort hamilton
- 34003 bergen, nj
- 34013 essex, nj
- 34017 hudson, nj
- 34023 middlesex, nj
- 34025 monmouth, nj
- 34027 morris, nj
- 34035 somerset, nj
- 34039 union, nj
- 36005 bronx, ny
- 36047 kings, ny
- 36059 nassau, ny
- 36061 new york, ny
- 36081 queens, ny
- 36085 richmond, ny
- 36087 rockland, ny
- 36119 westchester, ny

fort harrison
fort benjamin harrison
- 18011 boone, in
- 18023 clinton, in
- 18035 delaware, in
- 18057 hamilton, in
- 18059 hancock, in
- 18063 hendricks, in
- 18065 henry, in
- 18081 johnson, in
- 18095 madison, in
- 18097 marion, in
- 18109 morgan, in
- 18139 rush, in
- 18145 shelby, in
- 18159 tipton, in

fort hood
48027 bell, tx
48053 burnet, tx
48099 coryell, tx
48281 lampasas, tx
48309 mc lennan, tx
48491 williamson, tx

fort huachuca
04003 cochise, az
04019 pima, az
04023 santa cruz, az

hunter ligget military res
06053 monterey, ca
06079 san luis obispo, ca

fort irwin
06027 inyo, ca
06071 san bernardino, ca

fort jackson
45003 aiken, sc
45017 calhoun, sc
45039 fairfield, sc
45055 kershaw, sc
45057 lancaster, sc
45061 lee, sc
45063 lexington, sc
45071 newberry, sc
45075 orangeburg, sc
45079 richland, sc
45085 sumter, sc

kincheloe afb
26033 chippewa, mi
26097 mackinac, mi

kirtland afb
35001 bernalillo, nm
35043 sandoval, nm
35049 santa fe, nm
35057 torrance, nm
35061 valencia, nm

fort knox
18019 clark, in
18025 crawford, in
18043 floyd, in
18061 harrison, in
18123 perry, in
21027 breckinridge, ky
21029 bullitt, ky
21085 grayson, ky
21093 hardin, ky
21111 jefferson, ky

fort knox (cont)
21123 larue, ky
21163 meade, ky
21179 nelson, ky
21215 spencer, ky

lake city ammo plant
20091 johnson, ks
20209 wyandotte, ks
29037 cass, mo
29047 clay, mo
29095 jackson, mo
29107 lafayette, mo
29165 platte, mo
29177 ray, mo

fort leavenworth
20005 atchison, ks
20013 brown, ks
20043 doniphan, ks
20045 douglas, ks
20087 jefferson, ks
20091 johnson, ks
20103 leavenworth, ks
20209 wyandotte, ks
29021 buchanan, mo
29047 clay, mo
29049 clinton, mo
29095 jackson, mo
29165 platte, mo

fort lee
51007 amelia, va
51025 brunswick, va
51036 charles city, va
51041 chesterfield, va
51053 dinwiddie, va
51075 goochland, va
51085 hanover, va
51087 henrico, va
51095 james city, va
51127 new kent, va
51135 nottoway, va
51145 powhatan, va
51149 prince george, va
51175 southampton, va
51181 surry, va
51183 sussex, va

fort leonard wood
fort wood
29029 camden, mo
29065 dent, mo
29105 laclede, mo
29125 maries, mo
29131 miller, mo

fort leonard wood (cont)
29169 pulaski, mo
29161 phelps, mo
29215 texas, mo
29229 wright, mo

fort lewis
53027 grays harbor, wa
53033 king, wa
53035 kitsap, wa
53041 lewis, wa
53045 mason, wa
53053 pierce, wa
53067 thurston, wa

long island
36059 nassau, ny
36081 queens, ny
36103 suffolk, ny

fort mcclellan
01015 calhoun, al
01019 cherokee, al
01027 clay, al
01029 cleburne, al
01055 etowah, al
01111 randolph, al
01115 st clair, al
01121 talladega, al
13045 carroll, ga
13143 haralson, ga
13233 polk, ga

fort mcpherson
13057 cherokee, ga
13063 clayton, ga
13067 cobb, ga
13089 de kalb, ga
13097 douglas, ga
13121 fulton, ga
13135 gwinnett, ga
13151 henry, ga
13247 rockdale, ga

fort meade
11001 district of columbia, dc
24003 anne arundel, md
24005 baltimore, md
24009 calvert, md
24013 carroll, md
24017 charles, md
24021 frederick, md
24025 harford, md
24027 howard, md
24029 kent, md
24031 montgomery, md

fort meade (cont)
24033 prince georges, md
24035 queen annes, md
24041 talbot, md
24510 baltimore city, md
51013 arlington, va
51059 fairfax, va
51107 loudoun, va
51510 alexandria city, va
51600 fairfax city, va
51610 falls church city, va

memphis defense depot
05035 crittenden, ar
28033 de soto, ms
47157 shelby, tn
47167 tipton, tn

fort monroe
37053 currituck, nc
51073 gloucester, va
51095 james city, va
51199 york, va
51550 chesapeake city, va
51650 hampton city, va
51700 newport news city, va
51710 norfolk city, va
51740 portsmouth city, va
51810 virginia beach city, va
51830 williamsburg city, va

presidio of monterey
monterey presidio
06053 monterey, ca
06069 san benito, ca
06087 santa cruz, ca

fort myer
11001 district of columbia, dc
24003 anne arundel, md
24009 calvert, md
24017 charles, md
24031 montgomery, md
24033 prince georges, md
51013 arlington, va
51059 fairfax, va
51107 loudoun, va
51153 prince william, va
51510 alexandria city, va
51600 fairfax city, va
51610 falls church city, va

natick lab
25009 essex, ma
25017 middlesex, ma
25021 norfolk, ma

natick lab (cont)
25025 suffolk, ma
25027 worcester, ma
33011 hillsborough, nh

ogden defense depot
49003 box elder, ut
49005 cache, ut
49011 davis, ut
49029 morgan, ut
49035 salt lake, ut
49043 summit, ut
49057 weber, ut

fort ord
06053 monterey, ca
06069 san benito, ca
06085 santa clara, ca
06087 santa cruz, ca

fort polk
22003 allen, la
22011 beauregard, la
22069 natchitoches, la
22079 rapides, la
22085 sabine, la
22115 vernon, la
48351 newton, tx
48403 sabine, tx

red river army depot
red river depot
05057 hempstead, ar
05061 howard, ar
05073 lafayette, ar
05081 little river, ar
05091 miller, ar
05133 sevier, ar
48037 bowie, tx
48067 cass, tx

richards gebaur afb
richards-gebaur afb
20045 douglas, ks
20059 franklin, ks
20091 johnson, ks
20103 leavenworth, ks
20121 miami, ks
20209 wyandotte, ks
29013 bates, mo
29037 cass, mo
29047 clay, mo
29095 jackson, mo
29101 johnson, mo
29107 lafayette, mo
29165 platte, mo

fort riley
20027 clay, ks
20041 dickinson, ks
20061 geary, ks
20127 morris, ks
20143 ottawa, ks
20149 pottawatomie, ks
20161 riley, ks
20197 wabaunsee, ks

rio vista storage area
06001 alameda, ca
06013 contra costa, ca
06067 sacramento, ca
06077 san joaquin, ca
06095 solano, ca
06113 yolo, ca

fort ritchie
24013 carroll, md
24021 frederick, md
24043 washington, md
42001 adams, pa
42041 cumberland, pa
42055 franklin, pa
42057 fulton, pa
42133 york, pa
54003 berkeley, wv
54037 jefferson, wv
54065 morgan, wv

riverbank army ammo plant
06009 calaveras, ca
06047 merced, ca
06077 san joaquin, ca
06099 stanislaus, ca
06109 tuolumne, ca

camp roberts
06019 fresno, ca
06053 monterey, ca
06079 san luis obispo, ca

rock island arsenal
17073 henry, il
17095 knox, il
17131 mercer, il
17161 rock island, il
17195 whiteside, il
19031 cedar, ia
19045 clinton, ia
19139 muscatine, ia
19163 scott, ia

rocky mountain arsenal
08001 adams, co
08005 arapahoe, co
08013 boulder, co
08019 clear creek, co
08031 denver, co
08035 douglas, co
08039 elbert, co
08047 gilpin, co
08059 jefferson, co
08123 weld, co

fort rodman
25001 barnstable, ma
25005 bristol, ma
25007 dukes, ma
25023 plymouth, ma
44001 bristol, ri
44003 kent, ri
44005 newport, ri
44007 providence, ri
44009 washington, ri

fort rucker
01005 barbour, al
01031 coffee, al
01039 covington, al
01041 crenshaw, al
01045 dale, al
01061 geneva, al
01067 henry, al
01069 houston, al
01109 pike, al
12059 holmes, fl
12063 jackson, fl

sacramento army depot
06005 amador, ca
06017 el dorado, ca
06061 placer, ca
06067 sacramento, ca
06077 san joaquin, ca
06095 solano, ca
06101 sutter, ca
06113 yolo, ca

saginaw army aircraft plant
48113 dallas, tx
48121 denton, tx
48139 ellis, tx
48221 hood, tx
48251 johnson, tx
48367 parker, tx
48439 tarrant, tx
48497 wise, tx

st louis army ammo plant
st. louis army ammo plant
17013 calhoun, il
17027 clinton, il
17083 jersey, il
17117 macoupin, il
17119 madison, il
17133 monroe, il
17163 st clair, il
29071 franklin, mo
29099 jefferson, mo
29183 st charles, mo
29189 st louis, mo
29510 st louis city, mo

fort sam houston
fort houston
48013 atascosa, tx
48019 bandera, tx
48029 bexar, tx
48091 comal, tx
48187 guadalupe, tx
48259 kendall, tx
48325 medina, tx
48493 wilson, tx

camp san luis obispo
camp luis obispo
06079 san luis obispo, ca
06083 santa barbara, ca

savanna army depot
17015 carroll, il
17027 clinton, il
17077 jackson, il
17085 jo daviess, il
17141 ogle, il
17161 rock island, il
17177 stephenson, il
17195 whiteside, il

schofield barracks
15001 hawaii, hi
15003 honolulu, hi
15007 kauai, hi
15009 maui, hi

fort scott
06001 alameda, ca
06013 contra costa, ca
06041 marin, ca
06055 napa, ca
06075 san francisco, ca
06081 san mateo, ca
06085 santa clara, ca

fort scott (cont)
- 06095 solano, ca
- 06097 sonoma, ca

scott afb
- 17005 bond, il
- 17027 clinton, il
- 17119 madison, il
- 17133 monroe, il
- 17145 perry, il
- 17157 randolph, il
- 17163 st clair, il
- 17189 washington, il
- 29099 jefferson, mo
- 29183 st charles, mo
- 29189 st louis, mo
- 29510 st louis city, mo

scranton army ammo plant
- 42025 carbon, pa
- 42069 lackawanna, pa
- 42079 luzerne, pa
- 42089 monroe, pa
- 42103 pike, pa
- 42115 susquehanna, pa
- 42127 wayne, pa
- 42131 wyoming, pa

seneca army depot
- 36011 cayuga, ny
- 36067 onondaga, ny
- 36069 ontario, ny
- 36097 schuyler, ny
- 36099 seneca, ny
- 36101 steuben, ny
- 36109 tompkins, ny
- 36117 wayne, ny
- 36123 yates, ny

sharpe army depot
- 06001 alameda, ca
- 06009 calaveras, ca
- 06013 contra costa, ca
- 06077 san joaquin, ca
- 06099 stanislaus, ca

sierra army depot
- 06035 lassen, ca
- 06063 plumas, ca
- 32031 washoe, nv

fort sill
- 40015 caddo, ok
- 40031 comanche, ok
- 40033 cotton, ok
- 40051 grady, ok

fort sill (cont)
- 40075 kiowa, ok
- 40137 stephens, ok
- 40141 tillman, ok

sioux army depot
- 08075 logan, co
- 08115 sedgwick, co
- 31033 cheyenne, ne
- 31049 deuel, ne
- 31069 garden, ne
- 31105 kimball, ne
- 31123 morrill, ne

camp stanley
- 48013 atascosa, tx
- 48019 bandera, tx
- 48029 bexar, tx
- 48091 comal, tx
- 48187 guadalupe, tx
- 48259 kendall, tx
- 48325 medina, tx
- 48493 wilson, tx

fort stewart
fort steward
- 13029 bryan, ga
- 13031 bulloch, ga
- 13051 chatham, ga
- 13103 effingham, ga
- 13109 evans, ga
- 13179 liberty, ga
- 13183 long, ga
- 13191 mc intosh, ga
- 13267 tattnall, ga
- 45013 beaufort, sc
- 45053 jasper, sc

fort story
fort storey
- 37053 currituck, nc
- 51093 isle of wight, va
- 51550 chesapeake city, va
- 51650 hampton city, va
- 51700 newport news city, va
- 51740 portsmouth city, va
- 51810 virginia beach city, va

sunflower ammo plant
- 20045 douglas, ks
- 20059 franklin, ks
- 20087 jefferson, ks
- 20091 johnson, ks
- 20103 leavenworth, ks
- 20121 miami, ks
- 20139 osage, ks

sunflower ammo plant (cont)
20177 shawnee, ks
20209 wyandotte, ks

tarheel army missile plant
37001 alamance, nc
37033 caswell, nc
37037 chatham, nc
37063 durham, nc
37081 guilford, nc
37135 orange, nc
37145 person, nc
37151 randolph, nc
37157 rockingham, nc

fort tilden
34003 bergen, nj
34013 essex, nj
34017 hudson, nj
34023 middlesex, nj
34025 monmouth, nj
34031 passaic, nj
34039 union, nj
36005 bronx, ny
36047 kings, ny
36059 nassau, ny
36061 new york, ny
36081 queens, ny
36085 richmond, ny
36103 suffolk, ny
36119 westchester, ny

tyndall afb
12005 bay, fl
12013 calhoun, fl
12045 gulf, fl
12077 liberty, fl
12133 washington, fl

washington dc
district of columbia
11000 district of columbia

watervliet arsenal
36001 albany, ny
36083 rensselaer, ny
36091 saratoga, ny
36093 schenectady, ny

webb afb
48033 borden, tx
48115 dawson, tx
48173 glasscock, tx
48227 howard, tx
48317 martin, tx
48329 midland, tx

webb afb (cont)
48335 mitchell, tx
48415 scurry, tx
48431 sterling, tx

west point military res
usma
09001 fairfield, ct
34003 bergen, nj
34031 passaic, nj
34037 sussex, nj
36027 dutchess, ny
36071 orange, ny
36079 putnam, ny
36087 rockland, ny
36105 sullivan, ny
36111 ulster, ny
36119 westchester, ny

white sands missile range
white sands
35013 dona ana, nm
35027 lincoln, nm
35035 otero, nm
35051 sierra, nm
35053 socorro, nm

fort wolters
48143 erath, tx
48221 hood, tx
48237 jack, tx
48363 palo pinto, tx
48367 parker, tx
48429 stephens, tx
48497 wise, tx
48503 young, tx

wright patterson afb
wright-patterson afb
39017 butler, oh
39021 champaign, oh
39023 clark, oh
39027 clinton, oh
39037 darke, oh
39047 fayette, oh
39057 greene, oh
39097 madison, oh
39109 miami, oh
39113 montgomery, oh
39135 preble, oh
39149 shelby, oh
39165 warren, oh

yuma proving grounds
04027 yuma, az
06025 imperial, ca

APPENDIX E: 1977 BEA ECONOMIC AREAS

aberdeen sd bea
b148 bea
46013 brown, sd
46025 clark, sd
46029 codington, sd
46037 day, sd
46039 deuel, sd
46045 edmunds, sd
46049 faulk, sd
46051 grant, sd
46057 hamlin, sd
46089 mc pherson, sd
46091 marshall, sd
46109 roberts, sd
46115 spink, sd

abilene tx bea
b127 bea
48049 brown, tx
48059 callahan, tx
48083 coleman, tx
48093 comanche, tx
48133 eastland, tx
48151 fisher, tx
48207 haskell, tx
48253 jones, tx
48263 kent, tx
48275 knox, tx
48335 mitchell, tx
48353 nolan, tx
48415 scurry, tx
48417 shackelford, tx
48429 stephens, tx
48433 stonewall, tx
48441 taylor, tx
48447 throckmorton, tx

albany ga bea
b040 bea
13007 baker, ga
13017 ben hill, ga
13019 berrien, ga
13027 brooks, ga
13037 calhoun, ga
13061 clay, ga
13065 clinch, ga
13071 colquitt, ga
13075 cook, ga
13087 decatur, ga
13095 dougherty, ga
13099 early, ga
13101 echols, ga
13131 grady, ga
13155 irwin, ga
13173 lanier, ga
13177 lee, ga

albany ga bea (cont)
13185 lowndes, ga
13201 miller, ga
13205 mitchell, ga
13243 randolph, ga
13253 seminole, ga
13273 terrell, ga
13275 thomas, ga
13277 tift, ga
13287 turner, ga
13321 worth, ga

albany ny bea
schenectady ny bea
troy ny bea
b007 bea
36001 albany, ny
36019 clinton, ny
36021 columbia, ny
36031 essex, ny
36035 fulton, ny
36039 greene, ny
36041 hamilton, ny
36057 montgomery, ny
36083 rensselaer, ny
36091 saratoga, ny
36093 schenectady, ny
36095 schoharie, ny
36113 warren, ny
36115 washington, ny
50003 bennington, vt

albuquerque nm bea
b160 bea
35001 bernalillo, nm
35003 catron, nm
35007 colfax, nm
35011 de baca, nm
35019 guadalupe, nm
35027 lincoln, nm
35028 los alamos, nm
35031 mc kinley, nm
35033 mora, nm
35039 rio arriba, nm
35043 sandoval, nm
35045 san juan, nm
35047 san miguel, nm
35049 santa fe, nm
35053 socorro, nm
35055 taos, nm
35057 torrance, nm
35061 valencia, nm

amarillo tx bea
b135 bea
35009 curry, nm
35021 harding, nm
35037 quay, nm
35059 union, nm
40007 beaver, ok
40025 cimarron, ok
40139 texas, ok
48011 armstrong, tx
48045 brisc ,, tx
48065 carso.., tx
48069 castro, tx
48075 childress, tx
48087 collingsworth, tx
48111 dallam, tx
48117 deaf smith, tx
48129 donley, tx
48179 gray, tx
48191 hall, tx
48195 hansford, tx
48205 hartley, tx
48211 hemphill, tx
48233 hutchinson, tx
48295 lipscomb, tx
48341 moore, tx
48357 ochiltree, tx
48359 oldham, tx
48369 parmer, tx
48375 potter, tx
48381 randall, tx
48393 roberts, tx
48421 sherman, tx
48437 swisher, tx
48483 wheeler, tx

anchorage ak bea
anchorage bea
alaska bea
b182 bea
02010 aleutian islands, ak
02020 anchorage, ak
02030 angoon, ak
02040 barrow, ak
02050 bethel, ak
02060 bristol bay borough, ak
02070 bristol bay division, ak
02080 cordova mc carthy, ak
02090 fairbanks, ak
02100 haines, ak
02110 juneau, ak
02120 kenai cook inlet, ak
02130 ketchikan, ak
02140 kobuk, ak
02150 kodiak, ak
02160 kuskokwim, ak

anchorage ak bea (cont)
02170 matanuska susitna, ak
02180 nome, ak
02190 outer ketchikan, ak
02200 prince of wales, ak
02210 seward, ak
02220 sitka, ak
02230 skagway yakutat, ak
02240 southeast fairbanks, ak
02250 upper yukon, ak
02260 valdez chitina whittier, ak
02270 wade hampton, ak
02280 wrangell petersburg, ak
02290 yukon koyukuk, ak

anderson in bea
muncie in bea
b078 bea
18009 blackford, in
18035 delaware, in
18041 fayette, in
18065 henry, in
18075 jay, in
18095 madison, in
18135 randolph, in
18161 union, in
18177 wayne, in

appleton wi bea
green bay wi bea
oshkosh wi bea
b094 bea
26003 alger, mi
26013 baraga, mi
26041 delta, mi
26043 dickinson, mi
26061 houghton, mi
26071 iron, mi
26083 keweenaw, mi
26103 marquette, mi
26109 menominee, mi
26153 schoolcraft, mi
55009 brown, wi
55015 calumet, wi
55029 door, wi
55037 florence, wi
55039 fond du lac, wi
55041 forest, wi
55047 green lake, wi
55061 kewaunee, wi
55071 manitowoc, wi
55075 marinette, wi
55083 oconto, wi
55087 outagamie, wi
55135 waupaca, wi
55137 waushara, wi

appleton wi bea (cont)
55139 winnebago, wi
55901 shawano menominee, wi

asheville nc bea
b030 bea
37011 avery, nc
37021 buncombe, nc
37039 cherokee, nc
37043 clay, nc
37075 graham, nc
37087 haywood, nc
37089 henderson, nc
37099 jackson, nc
37111 mc dowell, nc
37113 macon, nc
37115 madison, nc
37121 mitchell, nc
37173 swain, nc
37175 transylvania, nc
37199 yancey, nc

atlanta ga bea
b036 bea
13011 banks, ga
13013 barrow, ga
13015 bartow, ga
13035 butts, ga
13045 carroll, ga
13057 cherokee, ga
13059 clarke, ga
13063 clayton, ga
13067 cobb, ga
13077 coweta, ga
13085 dawson, ga
13089 de kalb, ga
13097 douglas, ga
13105 elbert, ga
13111 fannin, ga
13113 fayette, ga
13115 floyd, ga
13117 forsyth, ga
13119 franklin, ga
13121 fulton, ga
13123 gilmer, ga
13129 gordon, ga
13133 greene, ga
13135 gwinnett, ga
13137 habersham, ga
13139 hall, ga
13143 haralson, ga
13147 hart, ga
13149 heard, ga
13151 henry, ga
13157 jackson, ga
13159 jasper, ga

atlanta ga bea (cont)
13171 lamar, ga
13187 lumpkin, ga
13195 madison, ga
13211 morgan, ga
13217 newton, ga
13219 oconee, ga
13221 oglethorpe, ga
13223 paulding, ga
13227 pickens, ga
13231 pike, ga
13233 polk, ga
13241 rabun, ga
13247 rockdale, ga
13255 spalding, ga
13257 stephens, ga
13281 towns, ga
13291 union, ga
13293 upson, ga
13297 walton, ga
13311 white, ga

augusta ga bea
b035 bea
13033 burke, ga
13073 columbia, ga
13107 emanuel, ga
13125 glascock, ga
13163 jefferson, ga
13165 jenkins, ga
13181 lincoln, ga
13189 mc duffie, ga
13245 richmond, ga
13265 taliaferro, ga
13301 warren, ga
13317 wilkes, ga
45003 aiken, sc
45005 allendale, sc
45009 bamberg, sc
45011 barnwell, sc
45037 edgefield, sc
45065 mc cormick, sc

austin tx bea
b123 bea
48021 bastrop, tx
48031 blanco, tx
48053 burnet, tx
48055 caldwell, tx
48209 hays, tx
48287 lee, tx
48299 llano, tx
48453 travis, tx
48491 williamson, tx

baltimore md bea
baltimore bea
b019 bea
24003 anne arundel, md
24005 baltimore, md
24011 caroline, md
24013 carroll, md
24019 dorchester, md
24025 harford, md
24027 howard, md
24029 kent, md
24035 queen annes, md
24039 somerset, md
24041 talbot, md
24045 wicomico, md
24047 worcester, md
24510 baltimore city, md
51001 accomack, va
51131 northampton, va

bangor me bea
b001 bea
23003 aroostook, me
23009 hancock, me
23019 penobscot, me
23021 piscataquis, me
23027 waldo, me
23029 washington, me

baton rouge la bea
baton rouge bea
b114 bea
22005 ascension, la
22029 concordia, la
22033 east baton rouge, la
22037 east feliciana, la
22047 iberville, la
22063 livingston, la
22077 pointe coupee, la
22091 st helena, la
22121 west baton rouge, la
22125 west feliciana, la
28001 adams, ms
28005 amite, ms
28157 wilkinson, ms

beaumont tx bea
port arthur tx bea
b121 bea
48199 hardin, tx
48241 jasper, tx
48245 jefferson, tx
48351 newton, tx
48361 orange, tx
48403 sabine, tx
48457 tyler, tx

billings mt bea
b155 bea
30003 big horn, mt
30009 carbon, mt
30011 carter, mt
30017 custer, mt
30021 dawson, mt
30025 fallon, mt
30031 gallatin, mt
30033 garfield, mt
30037 golden valley, mt
30055 mc cone, mt
30065 musselshell, mt
30075 powder river, mt
30079 prairie, mt
30087 rosebud, mt
30095 stillwater, mt
30097 sweet grass, mt
30103 treasure, mt
30109 wibaux, mt
30111 yellowstone, mt
30901 park, mt
56003 big horn, wy
56017 hot springs, wy
56029 park, wy
56033 sheridan, wy
56043 washakie, wy

binghamton ny bea
elmira ny bea
b011 bea
36007 broome, ny
36015 chemung, ny
36017 chenango, ny
36025 delaware, ny
36077 otsego, ny
36097 schuyler, ny
36101 steuben, ny
36107 tioga, ny
36109 tompkins, ny
42015 bradford, pa
42115 susquehanna, pa
42117 tioga, pa

birmingham al bea
b049 bea
01007 bibb, al
01009 blount, al
01015 calhoun, al
01019 cherokee, al
01021 chilton, al
01027 clay, al
01029 cleburne, al
01043 cullman, al
01055 etowah, al
01057 fayette, al

birmingham al bea (cont)
01063 greene, al
01065 hale, al
01073 jefferson, al
01075 lamar, al
01093 marion, al
01107 pickens, al
01111 randolph, al
01115 st clair, al
01117 shelby, al
01119 sumter, al
01121 talladega, al
01125 tuscaloosa, al
01127 walker, al
01133 winston, al

bismarck nd bea
bismark nd bea
b151 bea
38001 adams, nd
38007 billings, nd
38011 bowman, nd
38015 burleigh, nd
38025 dunn, nd
38029 emmons, nd
38033 golden valley, nd
38037 grant, nd
38041 hettinger, nd
38043 kidder, nd
38057 mercer, nd
38059 morton, nd
38065 oliver, nd
38083 sheridan, nd
38085 sioux, nd
38087 slope, nd
38089 stark, nd
38103 wells, nd

boise city id bea
boise id bea
b167 bea
16001 ada, id
16003 adams, id
16015 boise, id
16027 canyon, id
16039 elmore, id
16045 gem, id
16073 owyhee, id
16075 payette, id
16085 valley, id
16087 washington, id
41025 harney, or
41045 malheur, or

boston ma bea
boston bea
b004 bea
25001 barnstable, ma
25005 bristol, ma
25007 dukes, ma
25009 essex, ma
25017 middlesex, ma
25019 nantucket, ma
25021 norfolk, ma
25023 plymouth, ma
25025 suffolk, ma
25027 worcester, ma
33001 belknap, nh
33003 carroll, nh
33011 hillsborough, nh
33013 merrimack, nh
33015 rockingham, nh
33017 strafford, nh

brownsville tx bea
mcallen tx bea
harlingen tx bea
b131 bea
48061 cameron, tx
48215 hidalgo, tx
48427 starr, tx
48489 willacy, tx

buffalo ny bea
b010 bea
36003 allegany, ny
36009 cattaraugus, ny
36013 chautauqua, ny
36029 erie, ny
36063 niagara, ny
36121 wyoming, ny
42083 mc kean, pa
42105 potter, pa

burlington vt bea
b003 bea
33007 coos, nh
33009 grafton, nh
33019 sullivan, nh
50001 addison, vt
50005 caledonia, vt
50007 chittenden, vt
50009 essex, vt
50011 franklin, vt
50013 grand isle, vt
50015 lamoille, vt
50017 orange, vt
50019 orleans, vt
50021 rutland, vt

burlington vt bea (cont)
50023 washington, vt
50027 windsor, vt

cedar rapids ia bea
cedar rapids bea
b100 bea
19011 benton, ia
19031 cedar, ia
19095 iowa, ia
19103 johnson, ia
19105 jones, ia
19113 linn, ia
19183 washington, ia

champaign il bea
urbana il bea
b084 bea
17019 champaign, il
17029 coles, il
17035 cumberland, il
17041 douglas, il
17045 edgar, il
17053 ford, il
17147 piatt, il
17183 vermilion, il

charleston sc bea
north charleston sc bea
b034 bea
45015 berkeley, sc
45019 charleston, sc
45029 colleton, sc
45035 dorchester, sc

charleston wv bea
b060 bea
54005 boone, wv
54007 braxton, wv
54013 calhoun, wv
54015 clay, wv
54019 fayette, wv
54021 gilmer, wv
54025 greenbrier, wv
54035 jackson, wv
54039 kanawha, wv
54063 monroe, wv
54067 nicholas, wv
54075 pocahontas, wv
54079 putnam, wv
54081 raleigh, wv
54087 roane, wv
54089 summers, wv
54101 webster, wv
54109 wyoming, wv

charlotte nc bea
b029 bea
37003 alexander, nc
37007 anson, nc
37023 burke, nc
37025 cabarrus, nc
37027 caldwell, nc
37035 catawba, nc
37045 cleveland, nc
37071 gaston, nc
37097 iredell, nc
37109 lincoln, nc
37119 mecklenburg, nc
37159 rowan, nc
37161 rutherford, nc
37167 stanly, nc
37179 union, nc
45023 chester, sc
45057 lancaster, sc
45091 york, sc

chattanooga tn bea
chattanooga bea
b051 bea
01049 de kalb, al
01071 jackson, al
13047 catoosa, ga
13055 chattooga, ga
13083 dade, ga
13213 murray, ga
13295 walker, ga
13313 whitfield, ga
47007 bledsoe, tn
47011 bradley, tn
47061 grundy, tn
47065 hamilton, tn
47107 mc minn, tn
47115 marion, tn
47121 meigs, tn
47123 monroe, tn
47139 polk, tn
47143 rhea, tn
47153 sequatchie, tn

cheyenne wy bea
casper wy bea
b156 bea
08057 jackson, co
56001 albany, wy
56005 campbell, wy
56007 carbon, wy
56009 converse, wy
56013 fremont, wy
56019 johnson, wy
56021 laramie, wy

cheyenne wy bea (cont)
56025 natrona, wy
56031 platte, wy

chicago il bea
chicago bea
b083 bea
17011 bureau, il
17031 cook, il
17037 de kalb, il
17043 du page, il
17063 grundy, il
17075 iroquois, il
17089 kane, il
17091 kankakee, il
17093 kendall, il
17097 lake, il
17099 la salle, il
17105 livingston, il
17111 mc henry, il
17155 putnam, il
17197 will, il
18073 jasper, in
18089 lake, in
18091 la porte, in
18111 newton, in
18127 porter, in
18131 pulaski, in
18149 starke, in
55059 kenosha, wi

cincinnati oh bea
cincinnati bea
b067 bea
18029 dearborn, in
18047 franklin, in
18115 ohio, in
18137 ripley, in
18155 switzerland, in
21015 boone, ky
21023 bracken, ky
21037 campbell, ky
21041 carroll, ky
21069 fleming, ky
21077 gallatin, ky
21081 grant, ky
21117 kenton, ky
21135 lewis, ky
21161 mason, ky
21187 owen, ky
21191 pendleton, ky
21201 robertson, ky
39001 adams, oh
39015 brown, oh
39017 butler, oh
39025 clermont, oh

cincinnati oh bea (cont)
39027 clinton, oh
39061 hamilton, oh
39071 highland, oh
39165 warren, oh

cleveland oh bea
b065 bea
39005 ashland, oh
39007 ashtabula, oh
39019 carroll, oh
39031 coshocton, oh
39033 crawford, oh
39035 cuyahoga, oh
39043 erie, oh
39055 geauga, oh
39075 holmes, oh
39077 huron, oh
39085 lake, oh
39093 lorain, oh
39103 medina, oh
39133 portage, oh
39139 richland, oh
39151 stark, oh
39153 summit, oh
39157 tuscarawas, oh
39169 wayne, oh

colorado springs co bea
pueblo co bea
b158 bea
08003 alamosa, co
08009 baca, co
08011 bent, co
08015 chaffee, co
08021 conejos, co
08023 costilla, co
08025 crowley, co
08027 custer, co
08041 el paso, co
08043 fremont, co
08055 huerfano, co
08061 kiowa, co
08065 lake, co
08071 las animas, co
08073 lincoln, co
08079 mineral, co
08089 otero, co
08099 prowers, co
08101 pueblo, co
08105 rio grande, co
08109 saguache, co
08119 teller, co

columbia mo bea
b106 bea
29001 adair, mo
29007 audrain, mo
29019 boone, mo
29027 callaway, mo
29029 camden, mo
29041 chariton, mo
29051 cole, mo
29053 cooper, mo
29089 howard, mo
29103 knox, mo
29115 linn, mo
29121 macon, mo
29131 miller, mo
29135 moniteau, mo
29137 monroe, mo
29141 morgan, mo
29151 osage, mo
29171 putnam, mo
29175 randolph, mo
29197 schuyler, mo
29199 scotland, mo
29205 shelby, mo
29211 sullivan, mo

columbia sc bea
b032 bea
45017 calhoun, sc
45027 clarendon, sc
45039 fairfield, sc
45055 kershaw, sc
45061 lee, sc
45063 lexington, sc
45071 newberry, sc
45075 orangeburg, sc
45079 richland, sc
45081 saluda, sc
45085 sumter, sc

columbus ga bea
b037 bea
01017 chambers, al
01081 lee, al
01113 russell, al
13053 chattahoochee, ga
13145 harris, ga
13197 marion, ga
13199 meriwether, ga
13239 quitman, ga
13249 schley, ga
13259 stewart, ga
13261 sumter, ga
13263 talbot, ga
13285 troup, ga

columbus ga bea (cont)
13307 webster, ga
13510 columbus, ga

columbus oh bea
b066 bea
39009 athens, oh
39041 delaware, oh
39045 fairfield, oh
39047 fayette, oh
39049 franklin, oh
39059 guernsey, oh
39073 hocking, oh
39079 jackson, oh
39083 knox, oh
39089 licking, oh
39097 madison, oh
39101 marion, oh
39105 meigs, oh
39115 morgan, oh
39117 morrow, oh
39119 muskingum, oh
39121 noble, oh
39127 perry, oh
39129 pickaway, oh
39131 pike, oh
39141 ross, oh
39145 scioto, oh
39159 union, oh
39163 vinton, oh

corpus christi tx bea
corpus christi bea
b130 bea
48007 aransas, tx
48025 bee, tx
48047 brooks, tx
48131 duval, tx
48249 jim wells, tx
48261 kenedy, tx
48273 kleberg, tx
48297 live oak, tx
48355 nueces, tx
48391 refugio, tx
48409 san patricio, tx

dallas tx bea
ft worth tx bea
fort worth tx bea
ft worth bea
b125 bea
40013 bryan, ok
48085 collin, tx
48097 cooke, tx
48113 dallas, tx
48119 delta, tx

dallas tx bea (cont)
48121 denton, tx
48139 ellis, tx
48143 erath, tx
48147 fannin, tx
48159 franklin, tx
48181 grayson, tx
48221 hood, tx
48223 hopkins, tx
48231 hunt, tx
48237 jack, tx
48251 johnson, tx
48257 kaufman, tx
48337 montague, tx
48349 navarro, tx
48363 palo pinto, tx
48367 parker, tx
48379 rains, tx
48397 rockwall, tx
48425 somervell, tx
48439 tarrant, tx
48467 van zandt, tx
48497 wise, tx

davenport ia bea
rock island il bea
moline il bea
b099 bea
17015 carroll, il
17067 hancock, il
17071 henderson, il
17073 henry, il
17131 mercer, il
17161 rock island, il
17195 whiteside, il
19045 clinton, ia
19057 des moines, ia
19087 henry, ia
19111 lee, ia
19115 louisa, ia
19139 muscatine, ia
19163 scott, ia
29045 clark, mo

dayton oh bea
b068 bea
39021 champaign, oh
39023 clark, oh
39037 darke, oh
39057 greene, oh
39091 logan, oh
39109 miami, oh
39113 montgomery, oh
39135 preble, oh
39149 shelby, oh

denver co bea
b157 bea
08001 adams, co
08005 arapahoe, co
08013 boulder, co
08017 cheyenne, co
08019 clear creek, co
08031 denver, co
08035 douglas, co
08039 elbert, co
08047 gilpin, co
08049 grand, co
08059 jefferson, co
08063 kit carson, co
08069 larimer, co
08075 logan, co
08087 morgan, co
08093 park, co
08095 phillips, co
08115 sedgwick, co
08117 summit, co
08121 washington, co
08123 weld, co
08125 yuma, co

des moines ia bea
des moines bea
b104 bea
19001 adair, ia
19007 appanoose, ia
19015 boone, ia
19039 clarke, ia
19049 dallas, ia
19051 davis, ia
19053 decatur, ia
19077 guthrie, ia
19099 jasper, ia
19101 jefferson, ia
19107 keokuk, ia
19117 lucas, ia
19121 madison, ia
19123 mahaska, ia
19125 marion, ia
19127 marshall, ia
19135 monroe, ia
19153 polk, ia
19157 poweshiek, ia
19159 ringgold, ia
19169 story, ia
19171 tama, ia
19175 union, ia
19177 van buren, ia
19179 wapello, ia
19181 warren, ia
19185 wayne, ia

detroit mi bea
detroit bea
b071 bea
26049 genesee, mi
26087 lapeer, mi
26093 livingston, mi
26099 macomb, mi
26125 oakland, mi
26147 st clair, mi
26151 sanilac, mi
26155 shiawassee, mi
26161 washtenaw, mi
26163 wayne, mi

dubuque ia bea
b098 bea
17085 jo daviess, il
19005 allamakee, ia
19043 clayton, ia
19055 delaware, ia
19061 dubuque, ia
19097 jackson, ia
19191 winneshiek, ia
55023 crawford, wi
55043 grant, wi
55065 lafayette, wi

duluth mn bea
b095 bea
26053 gogebic, mi
26131 ontonagon, mi
27017 carlton, mn
27031 cook, mn
27061 itasca, mn
27071 koochiching, mn
27075 lake, mn
27137 st louis, mn
55003 ashland, wi
55007 bayfield, wi
55031 douglas, wi
55051 iron, wi

eau claire wi bea
b092 bea
55005 barron, wi
55017 chippewa, wi
55033 dunn, wi
55035 eau claire, wi
55091 pepin, wi
55107 rusk, wi
55113 sawyer, wi
55129 washburn, wi

el paso tx bea
b133 bea
35005 chaves, nm
35013 dona ana, nm
35015 eddy, nm
35017 grant, nm
35023 hidalgo, nm
35029 luna, nm
35035 otero, nm
35051 sierra, nm
48043 brewster, tx
48109 culberson, tx
48141 el paso, tx
48229 hudspeth, tx
48243 jeff davis, tx
48377 presidio, tx

erie pa bea
b015 bea
42031 clarion, pa
42039 crawford, pa
42049 erie, pa
42053 forest, pa
42121 venango, pa
42123 warren, pa

eugene or bea
b173 bea
41011 coos, or
41015 curry, or
41019 douglas, or
41029 jackson, or
41033 josephine, or
41035 klamath, or
41037 lake, or
41039 lane, or

eureka ca bea
b175 bea
06015 del norte, ca
06023 humboldt, ca
06105 trinity, ca

evansville in bea
b080 bea
17047 edwards, il
17059 gallatin, il
17065 hamilton, il
17101 lawrence, il
17165 saline, il
17185 wabash, il
17193 white, il
18037 dubois, in
18051 gibson, in
18083 knox, in
18123 perry, in

evansville in bea (cont)
18125 pike, in
18129 posey, in
18147 spencer, in
18163 vanderburgh, in
18173 warrick, in
21059 daviess, ky
21091 hancock, ky
21101 henderson, ky
21107 hopkins, ky
21149 mc lean, ky
21177 muhlenberg, ky
21183 ohio, ky
21225 union, ky
21233 webster, ky

fargo nd bea
moorhead mn bea
b149 bea
27005 becker, mn
27027 clay, mn
27111 otter tail, mn
27167 wilkin, mn
38003 barnes, nd
38017 cass, nd
38021 dickey, nd
38027 eddy, nd
38031 foster, nd
38039 griggs, nd
38045 la moure, nd
38047 logan, nd
38051 mc intosh, nd
38073 ransom, nd
38077 richland, nd
38081 sargent, nd
38091 steele, nd
38093 stutsman, nd
38097 traill, nd

fayetteville ar bea
b109 bea
05005 baxter, ar
05009 boone, ar
05015 carroll, ar
05087 madison, ar
05089 marion, ar
05101 newton, ar
05129 searcy, ar
05143 washington, ar
29015 benton, mo
40001 adair, ok
40041 delaware, ok

fayetteville nc bea
b026 bea
37017 bladen, nc
37051 cumberland, nc
37093 hoke, nc
37153 richmond, nc
37155 robeson, nc
37163 sampson, nc
37165 scotland, nc

florence sc bea
b033 bea
45025 chesterfield, sc
45031 darlington, sc
45033 dillon, sc
45041 florence, sc
45043 georgetown, sc
45051 horry, sc
45067 marion, sc
45069 marlboro, sc
45089 williamsburg, sc

fort dodge ia bea
ft dodge ia bea
b102 bea
19021 buena vista, ia
19025 calhoun, ia
19027 carroll, ia
19041 clay, ia
19059 dickinson, ia
19063 emmet, ia
19073 greene, ia
19079 hamilton, ia
19091 humboldt, ia
19109 kossuth, ia
19147 palo alto, ia
19151 pocahontas, ia
19161 sac, ia
19187 webster, ia
19197 wright, ia

fort smith ar bea
ft smith ar bea
b110 bea
05033 crawford, ar
05047 franklin, ar
05083 logan, ar
05113 polk, ar
05127 scott, ar
05131 sebastian, ar
40023 choctaw, ok
40061 haskell, ok
40077 latimer, ok
40079 le flore, ok
40089 mc curtain, ok
40121 pittsburg, ok

fort smith ar bea (cont)
40127 pushmataha, ok
40135 sequoyah, ok

fort wayne in bea
ft wayne in bea
b076 bea
18001 adams, in
18003 allen, in
18033 de kalb, in
18069 huntington, in
18113 noble, in
18151 steuben, in
18179 wells, in
18183 whitley, in
39039 defiance, oh
39125 paulding, oh
39171 williams, oh

fresno ca bea
bakersfield ca bea
b179 bea
06019 fresno, ca
06029 kern, ca
06031 kings, ca
06039 madera, ca
06107 tulare, ca

grand forks nd bea
b150 bea
27007 beltrami, mn
27029 clearwater, mn
27057 hubbard, mn
27069 kittson, mn
27077 lake of the woods, mn
27087 mahnomen, mn
27089 marshall, mn
27107 norman, mn
27113 pennington, mn
27119 polk, mn
27125 red lake, mn
27135 roseau, mn
38005 benson, nd
38019 cavalier, nd
38035 grand forks, nd
38063 nelson, nd
38067 pembina, nd
38071 ramsey, nd
38095 towner, nd
38099 walsh, nd

grand island ne bea
b144 bea
31001 adams, ne
31005 arthur, ne
31009 blaine, ne

grand island ne bea (cont)
31011 boone, ne
31015 boyd, ne
31017 brown, ne
31019 buffalo, ne
31029 chase, ne
31031 cherry, ne
31035 clay, ne
31041 custer, ne
31047 dawson, ne
31057 dundy, ne
31061 franklin, ne
31063 frontier, ne
31065 furnas, ne
31071 garfield, ne
31073 gosper, ne
31075 grant, ne
31077 greeley, ne
31079 hall, ne
31081 hamilton, ne
31083 harlan, ne
31085 hayes, ne
31087 hitchcock, ne
31089 holt, ne
31091 hooker, ne
31093 howard, ne
31099 kearney, ne
31101 keith, ne
31103 keya paha, ne
31111 lincoln, ne
31113 logan, ne
31115 loup, ne
31117 mc pherson, ne
31121 merrick, ne
31125 nance, ne
31129 nuckolls, ne
31135 perkins, ne
31137 phelps, ne
31145 red willow, ne
31149 rock, ne
31163 sherman, ne
31171 thomas, ne
31175 valley, ne
31181 webster, ne
31183 wheeler, ne

grand junction co bea
b159 bea
08007 archuleta, co
08029 delta, co
08033 dolores, co
08037 eagle, co
08045 garfield, co
08051 gunnison, co
08053 hinsdale, co
08067 la plata, co

grand junction co bea (cont)
- 08077 mesa, co
- 08081 moffat, co
- 08083 montezuma, co
- 08085 montrose, co
- 08091 ouray, co
- 08097 pitkin, co
- 08103 rio blanco, co
- 08107 routt, co
- 08111 san juan, co
- 08113 san miguel, co
- 49019 grand, ut
- 49037 san juan, ut

grand rapids mi bea
b073 bea
- 26005 allegan, mi
- 26009 antrim, mi
- 26019 benzie, mi
- 26029 charlevoix, mi
- 26047 emmet, mi
- 26055 grand traverse, mi
- 26079 kalkaska, mi
- 26081 kent, mi
- 26085 lake, mi
- 26089 leelanau, mi
- 26101 manistee, mi
- 26105 mason, mi
- 26107 mecosta, mi
- 26113 missaukee, mi
- 26117 montcalm, mi
- 26121 muskegon, mi
- 26123 newaygo, mi
- 26127 oceana, mi
- 26133 osceola, mi
- 26139 ottawa, mi
- 26165 wexford, mi

great falls mt bea
b153 bea
- 30005 blaine, mt
- 30007 broadwater, mt
- 30013 cascade, mt
- 30015 chouteau, mt
- 30027 fergus, mt
- 30035 glacier, mt
- 30041 hill, mt
- 30043 jefferson, mt
- 30045 judith basin, mt
- 30049 lewis and clark, mt
- 30051 liberty, mt
- 30059 meagher, mt
- 30069 petroleum, mt
- 30071 phillips, mt
- 30073 pondera, mt
- 30099 teton, mt

great falls mt bea (cont)
- 30101 toole, mt
- 30105 valley, mt
- 30107 wheatland, mt

greensboro nc bea
winston-salem nc bea
high point nc bea
b028 bea
- 37001 alamance, nc
- 37005 alleghany, nc
- 37009 ashe, nc
- 37033 caswell, nc
- 37057 davidson, nc
- 37059 davie, nc
- 37067 forsyth, nc
- 37081 guilford, nc
- 37123 montgomery, nc
- 37125 moore, nc
- 37151 randolph, nc
- 37157 rockingham, nc
- 37169 stokes, nc
- 37171 surry, nc
- 37189 watauga, nc
- 37193 wilkes, nc
- 37197 yadkin, nc

greenville sc bea
spartanburg sc bea
b031 bea
- 37149 polk, nc
- 45001 abbeville, sc
- 45007 anderson, sc
- 45021 cherokee, sc
- 45045 greenville, sc
- 45047 greenwood, sc
- 45059 laurens, sc
- 45073 oconee, sc
- 45077 pickens, sc
- 45083 spartanburg, sc
- 45087 union, sc

harrisburg pa bea
york pa bea
lancaster pa bea
b017 bea
- 42001 adams, pa
- 42041 cumberland, pa
- 42043 dauphin, pa
- 42055 franklin, pa
- 42057 fulton, pa
- 42061 huntingdon, pa
- 42067 juniata, pa
- 42071 lancaster, pa
- 42075 lebanon, pa
- 42087 mifflin, pa

harrisburg pa bea (cont)
42099 perry, pa
42133 york, pa

hartford ct bea
new haven ct bea
springfield ma bea
b006 bea
09003 hartford, ct
09005 litchfield, ct
09007 middlesex, ct
09009 new haven, ct
09011 new london, ct
09013 tolland, ct
09015 windham, ct
25003 berkshire, ma
25011 franklin, ma
25013 hampden, ma
25015 hampshire, ma
33005 cheshire, nh
50025 windham, vt

honolulu hi bea
hawaii bea
honolulu ha bea
honolulu bea
b183 bea
15001 hawaii, hi
15003 honolulu, hi
15007 kauai, hi
15009 maui, hi

houston tx bea
b122 bea
48015 austin, tx
48039 brazoria, tx
48041 brazos, tx
48051 burleson, tx
48057 calhoun, tx
48071 chambers, tx
48089 colorado, tx
48123 de witt, tx
48149 fayette, tx
48157 fort bend, tx
48167 galveston, tx
48175 goliad, tx
48185 grimes, tx
48201 harris, tx
48239 jackson, tx
48285 lavaca, tx
48289 leon, tx
48291 liberty, tx
48313 madison, tx
48321 matagorda, tx
48339 montgomery, tx
48373 polk, tx

houston tx bea (cont)
48395 robertson, tx
48407 san jacinto, tx
48455 trinity, tx
48469 victoria, tx
48471 walker, tx
48473 waller, tx
48477 washington, tx
48481 wharton, tx

huntington wv bea
b059 bea
21019 boyd, ky
21043 carter, ky
21063 elliott, ky
21071 floyd, ky
21089 greenup, ky
21115 johnson, ky
21127 lawrence, ky
21159 martin, ky
21195 pike, ky
21205 rowan, ky
39053 gallia, oh
39087 lawrence, oh
54011 cabell, wv
54043 lincoln, wv
54045 logan, wv
54053 mason, wv
54059 mingo, wv
54099 wayne, wv

huntsville al bea
florence al bea
b050 bea
01033 colbert, al
01059 franklin, al
01077 lauderdale, al
01079 lawrence, al
01083 limestone, al
01089 madison, al
01095 marshall, al
01103 morgan, al
47103 lincoln, tn

indianapolis in bea
indianapolis bea
b079 bea
18005 bartholomew, in
18011 boone, in
18013 brown, in
18027 daviess, in
18031 decatur, in
18055 greene, in
18057 hamilton, in
18059 hancock, in
18063 hendricks, in

indianapolis in bea (cont)
18071 jackson, in
18079 jennings, in
18081 johnson, in
18093 lawrence, in
18097 marion, in
18101 martin, in
18105 monroe, in
18109 morgan, in
18119 owen, in
18133 putnam, in
18139 rush, in
18145 shelby, in

jackson ms bea
jackson miss bea
b112 bea
28007 attala, ms
28019 choctaw, ms
28021 claiborne, ms
28023 clarke, ms
28029 copiah, ms
28031 covington, ms
28037 franklin, ms
28049 hinds, ms
28051 holmes, ms
28053 humphreys, ms
28055 issaquena, ms
28061 jasper, ms
28063 jefferson, ms
28065 jefferson davis, ms
28067 jones, ms
28069 kemper, ms
28075 lauderdale, ms
28077 lawrence, ms
28079 leake, ms
28085 lincoln, ms
28087 lowndes, ms
28089 madison, ms
28099 neshoba, ms
28101 newton, ms
28103 noxubee, ms
28105 oktibbeha, ms
28121 rankin, ms
28123 scott, ms
28125 sharkey, ms
28127 simpson, ms
28129 smith, ms
28149 warren, ms
28153 wayne, ms
28159 winston, ms
28163 yazoo, ms

jacksonville fl bea
b041 bea
12001 alachua, fl
12003 baker, fl
12007 bradford, fl
12019 clay, fl
12023 columbia, fl
12029 dixie, fl
12031 duval, fl
12041 gilchrist, fl
12047 hamilton, fl
12067 lafayette, fl
12075 levy, fl
12083 marion, fl
12089 nassau, fl
12107 putnam, fl
12109 st johns, fl
12121 suwannee, fl
12125 union, fl
13025 brantley, ga
13039 camden, ga
13049 charlton, ga
13127 glynn, ga
13229 pierce, ga
13299 ware, ga

johnson city tn bea
kingsport tn bea
bristol va bea
b052 bea
47019 carter, tn
47059 greene, tn
47067 hancock, tn
47073 hawkins, tn
47091 johnson, tn
47163 sullivan, tn
47171 unicoi, tn
47179 washington, tn
51027 buchanan, va
51051 dickenson, va
51105 lee, va
51167 russell, va
51169 scott, va
51173 smyth, va
51185 tazewell, va
51191 washington, va
51195 wise, va
51520 bristol city, va
51720 norton city, va
54047 mc dowell, wv
54055 mercer, wv

kansas city mo bea
kansas city bea
b105 bea

20003	anderson, ks
20005	atchison, ks
20013	brown, ks
20043	doniphan, ks
20045	douglas, ks
20059	franklin, ks
20091	johnson, ks
20103	leavenworth, ks
20107	linn, ks
20121	miami, ks
20209	wyandotte, ks
29003	andrew, mo
29005	atchison, mo
29013	bates, mo
29015	benton, mo
29021	buchanan, mo
29025	caldwell, mo
29033	carroll, mo
29037	cass, mo
29047	clay, mo
29049	clinton, mo
29061	daviess, mo
29063	de kalb, mo
29075	gentry, mo
29079	grundy, mo
29081	harrison, mo
29083	henry, mo
29087	holt, mo
29095	jackson, mo
29101	johnson, mo
29107	lafayette, mo
29117	livingston, mo
29129	mercer, mo
29147	nodaway, mo
29159	pettis, mo
29165	platte, mo
29177	ray, mo
29195	saline, mo
29227	worth, mo

knoxville tn bea
b053 bea

21013	bell, ky
21095	harlan, ky
21121	knox, ky
21125	laurel, ky
21147	mc creary, ky
21231	wayne, ky
21235	whitley, ky
47001	anderson, tn
47009	blount, tn
47013	campbell, tn
47025	claiborne, tn

knoxville tn bea (cont)

47029	cocke, tn
47035	cumberland, tn
47049	fentress, tn
47057	grainger, tn
47063	hamblen, tn
47089	jefferson, tn
47093	knox, tn
47105	loudon, tn
47129	morgan, tn
47145	roane, tn
47151	scott, tn
47155	sevier, tn
47173	union, tn

kokomo in bea
marion in bea
b077 bea

18017	cass, in
18053	grant, in
18067	howard, in
18103	miami, in
18159	tipton, in
18169	wabash, in

la crosse wi bea
b091 bea

27055	houston, mn
27169	winona, mn
55011	buffalo, wi
55053	jackson, wi
55057	juneau, wi
55063	la crosse, wi
55081	monroe, wi
55121	trempealeau, wi
55123	vernon, wi

lafayette in bea
b082 bea

18007	benton, in
18015	carroll, in
18023	clinton, in
18045	fountain, in
18107	montgomery, in
18157	tippecanoe, in
18171	warren, in
18181	white, in

lafayette la bea
b115 bea

22001	acadia, la
22039	evangeline, la
22045	iberia, la
22055	lafayette, la
22097	st landry, la
22099	st martin, la

lafayette la bea (cont)
22101 st mary, la
22113 vermilion, la

lake charles la bea
b116 bea
22003 allen, la
22011 beauregard, la
22019 calcasieu, la
22023 cameron, la
22053 jefferson davis, la
22115 vernon, la

lansing mi bea
kalamazoo mi bea
b074 bea
26015 barry, mi
26023 branch, mi
26025 calhoun, mi
26037 clinton, mi
26045 eaton, mi
26059 hillsdale, mi
26065 ingham, mi
26067 ionia, mi
26075 jackson, mi
26077 kalamazoo, mi
26159 van buren, mi

las vegas nv bea
b163 bea
32003 clark, nv
32009 esmeralda, nv
32017 lincoln, nv
32023 nye, nv
49001 beaver, ut
49017 garfield, ut
49021 iron, ut
49025 kane, ut
49053 washington, ut

lawton ok bea
b136 bea
40031 comanche, ok
40033 cotton, ok
40055 greer, ok
40057 harmon, ok
40065 jackson, ok
40067 jefferson, ok
40075 kiowa, ok
40137 stephens, ok
40141 tillman, ok

lexington ky bea
b058 bea
21001 adair, ky
21005 anderson, ky

lexington ky bea (cont)
21011 bath, ky
21017 bourbon, ky
21021 boyle, ky
21025 breathitt, ky
21045 casey, ky
21049 clark, ky
21051 clay, ky
21065 estill, ky
21067 fayette, ky
21073 franklin, ky
21079 garrard, ky
21087 green, ky
21097 harrison, ky
21109 jackson, ky
21113 jessamine, ky
21119 knott, ky
21129 lee, ky
21131 leslie, ky
21133 letcher, ky
21137 lincoln, ky
21151 madison, ky
21153 magoffin, ky
21165 menifee, ky
21167 mercer, ky
21173 montgomery, ky
21175 morgan, ky
21181 nicholas, ky
21189 owsley, ky
21193 perry, ky
21197 powell, ky
21199 pulaski, ky
21203 rockcastle, ky
21207 russell, ky
21209 scott, ky
21217 taylor, ky
21237 wolfe, ky
21239 woodford, ky

lima oh bea
b069 bea
39003 allen, oh
39011 auglaize, oh
39065 hardin, oh
39107 mercer, oh
39137 putnam, oh
39161 van wert, oh

lincoln ne bea
b142 bea
31023 butler, ne
31059 fillmore, ne
31067 gage, ne
31095 jefferson, ne
31097 johnson, ne
31109 lancaster, ne

lincoln ne bea (cont)
31127 nemaha, ne
31131 otoe, ne
31133 pawnee, ne
31143 polk, ne
31147 richardson, ne
31151 saline, ne
31159 seward, ne
31169 thayer, ne
31185 york, ne

little rock ar bea
north little rock ar bea
little rock bea
b111 bea
05001 arkansas, ar
05003 ashley, ar
05011 bradley, ar
05013 calhoun, ar
05017 chicot, ar
05019 clark, ar
05023 cleburne, ar
05025 cleveland, ar
05029 conway, ar
05039 dallas, ar
05041 desha, ar
05043 drew, ar
05045 faulkner, ar
05049 fulton, ar
05051 garland, ar
05053 grant, ar
05059 hot spring, ar
05063 independence, ar
05065 izard, ar
05067 jackson, ar
05069 jefferson, ar
05071 johnson, ar
05079 lincoln, ar
05085 lonoke, ar
05095 monroe, ar
05097 montgomery, ar
05103 ouachita, ar
05105 perry, ar
05115 pope, ar
05117 prairie, ar
05119 pulaski, ar
05125 saline, ar
05135 sharp, ar
05137 stone, ar
05139 union, ar
05141 van buren, ar
05145 white, ar
05147 woodruff, ar
05149 yell, ar

los angeles ca bea
los angeles bea
b180 bea
06027 inyo, ca
06037 los angeles, ca
06051 mono, ca
06059 orange, ca
06065 riverside, ca
06071 san bernardino, ca
06079 san luis obispo, ca
06083 santa barbara, ca
06111 ventura, ca

louisville ky bea
b057 bea
18019 clark, in
18025 crawford, in
18043 floyd, in
18061 harrison, in
18077 jefferson, in
18117 orange, in
18143 scott, in
18175 washington, in
21027 breckinridge, ky
21029 bullitt, ky
21085 grayson, ky
21093 hardin, ky
21099 hart, ky
21103 henry, ky
21111 jefferson, ky
21123 larue, ky
21155 marion, ky
21163 meade, ky
21179 nelson, ky
21185 oldham, ky
21211 shelby, ky
21215 spencer, ky
21223 trimble, ky
21229 washington, ky

lubbock tx bea
b134 bea
35025 lea, nm
35041 roosevelt, nm
48017 bailey, tx
48033 borden, tx
48079 cochran, tx
48107 crosby, tx
48115 dawson, tx
48125 dickens, tx
48153 floyd, tx
48165 gaines, tx
48169 garza, tx
48189 hale, tx
48219 hockley, tx
48269 king, tx

lubbock tx bea (cont)
48279 lamb, tx
48303 lubbock, tx
48305 lynn, tx
48345 motley, tx
48445 terry, tx
48501 yoakum, tx

macon ga bea
b038 bea
13009 baldwin, ga
13021 bibb, ga
13023 bleckley, ga
13079 crawford, ga
13081 crisp, ga
13091 dodge, ga
13093 dooly, ga
13141 hancock, ga
13153 houston, ga
13167 johnson, ga
13169 jones, ga
13175 laurens, ga
13193 macon, ga
13207 monroe, ga
13225 peach, ga
13235 pulaski, ga
13237 putnam, ga
13269 taylor, ga
13271 telfair, ga
13283 treutlen, ga
13289 twiggs, ga
13303 washington, ga
13309 wheeler, ga
13315 wilcox, ga
13319 wilkinson, ga

madison wi bea
b090 bea
55001 adams, wi
55021 columbia, wi
55025 dane, wi
55045 green, wi
55049 iowa, wi
55077 marquette, wi
55103 richland, wi
55111 sauk, wi

memphis tn bea
b055 bea
05021 clay, ar
05031 craighead, ar
05035 crittenden, ar
05037 cross, ar
05055 greene, ar
05075 lawrence, ar
05077 lee, ar

memphis tn bea (cont)
05093 mississippi, ar
05107 phillips, ar
05111 poinsett, ar
05121 randolph, ar
05123 st francis, ar
28003 alcorn, ms
28009 benton, ms
28011 bolivar, ms
28013 calhoun, ms
28015 carroll, ms
28017 chickasaw, ms
28025 clay, ms
28027 coahoma, ms
28033 de soto, ms
28043 grenada, ms
28057 itawamba, ms
28071 lafayette, ms
28081 lee, ms
28083 leflore, ms
28093 marshall, ms
28095 monroe, ms
28097 montgomery, ms
28107 panola, ms
28115 pontotoc, ms
28117 prentiss, ms
28119 quitman, ms
28133 sunflower, ms
28135 tallahatchie, ms
28137 tate, ms
28139 tippah, ms
28141 tishomingo, ms
28143 tunica, ms
28145 union, ms
28151 washington, ms
28155 webster, ms
28161 yalobusha, ms
29069 dunklin, mo
29143 new madrid, mo
29155 pemiscot, mo
47005 benton, tn
47017 carroll, tn
47023 chester, tn
47033 crockett, tn
47039 decatur, tn
47045 dyer, tn
47047 fayette, tn
47053 gibson, tn
47069 hardeman, tn
47071 hardin, tn
47075 haywood, tn
47077 henderson, tn
47079 henry, tn
47095 lake, tn
47097 lauderdale, tn
47109 mc nairy, tn

memphis tn bea (cont)
- 47113 madison, tn
- 47131 obion, tn
- 47157 shelby, tn
- 47167 tipton, tn
- 47183 weakley, tn

miami fl bea
fort lauderdale fl bea
ft lauderdale bea
b043 bea
- 12011 broward, fl
- 12025 dade, fl
- 12043 glades, fl
- 12051 hendry, fl
- 12061 indian river, fl
- 12085 martin, fl
- 12087 monroe, fl
- 12093 okeechobee, fl
- 12099 palm beach, fl
- 12111 st lucie, fl

milwaukee wi bea
milwaukee bea
b089 bea
- 55027 dodge, wi
- 55055 jefferson, wi
- 55079 milwaukee, wi
- 55089 ozaukee, wi
- 55101 racine, wi
- 55117 sheboygan, wi
- 55127 walworth, wi
- 55131 washington, wi
- 55133 waukesha, wi

minneapolis mn bea
st paul mn bea
minneapolis bea
b096 bea
- 27001 aitkin, mn
- 27003 anoka, mn
- 27009 benton, mn
- 27011 big stone, mn
- 27013 blue earth, mn
- 27015 brown, mn
- 27019 carver, mn
- 27021 cass, mn
- 27023 chippewa, mn
- 27025 chisago, mn
- 27035 crow wing, mn
- 27037 dakota, mn
- 27041 douglas, mn
- 27043 faribault, mn
- 27049 goodhue, mn
- 27051 grant, mn
- 27053 hennepin, mn

minneapolis mn bea (cont)
- 27059 isanti, mn
- 27065 kanabec, mn
- 27067 kandiyohi, mn
- 27073 lac qui parle, mn
- 27079 le sueur, mn
- 27085 mc leod, mn
- 27091 martin, mn
- 27093 meeker, mn
- 27095 mille lacs, mn
- 27097 morrison, mn
- 27103 nicollet, mn
- 27115 pine, mn
- 27121 pope, mn
- 27123 ramsey, mn
- 27129 renville, mn
- 27131 rice, mn
- 27139 scott, mn
- 27141 sherburne, mn
- 27143 sibley, mn
- 27145 stearns, mn
- 27149 stevens, mn
- 27151 swift, mn
- 27153 todd, mn
- 27155 traverse, mn
- 27159 wadena, mn
- 27161 waseca, mn
- 27163 washington, mn
- 27165 watonwan, mn
- 27171 wright, mn
- 27173 yellow medicine, mn
- 55013 burnett, wi
- 55093 pierce, wi
- 55095 polk, wi
- 55109 st croix, wi

minot nd bea
b152 bea
- 30019 daniels, mt
- 30083 richland, mt
- 30085 roosevelt, mt
- 30091 sheridan, mt
- 38009 bottineau, nd
- 38013 burke, nd
- 38023 divide, nd
- 38049 mc henry, nd
- 38053 mc kenzie, nd
- 38055 mc lean, nd
- 38061 mountrail, nd
- 38069 pierce, nd
- 38075 renville, nd
- 38079 rolette, nd
- 38101 ward, nd
- 38105 williams, nd

missoula mt bea
b154 bea
30001 beaverhead, mt
30023 deer lodge, mt
30029 flathead, mt
30039 granite, mt
30047 lake, mt
30053 lincoln, mt
30057 madison, mt
30061 mineral, mt
30063 missoula, mt
30077 powell, mt
30081 ravalli, mt
30089 sanders, mt
30093 silver bow, mt

mobile al bea
b047 bea
01003 baldwin, al
01023 choctaw, al
01025 clarke, al
01035 conecuh, al
01053 escambia, al
01091 marengo, al
01097 mobile, al
01099 monroe, al
01129 washington, al
01131 wilcox, al
28039 george, ms
28041 greene, ms
28059 jackson, ms

monroe la bea
b118 bea
22021 caldwell, la
22025 catahoula, la
22035 east carroll, la
22041 franklin, la
22049 jackson, la
22059 la salle, la
22061 lincoln, la
22065 madison, la
22067 morehouse, la
22073 ouachita, la
22083 richland, la
22107 tensas, la
22111 union, la
22123 west carroll, la

montgomery al bea
b048 bea
01001 autauga, al
01005 barbour, al
01011 bullock, al
01013 butler, al
01031 coffee, al

montgomery al bea (cont)
01037 coosa, al
01039 covington, al
01041 crenshaw, al
01045 dale, al
01047 dallas, al
01051 elmore, al
01061 geneva, al
01067 henry, al
01069 houston, al
01085 lowndes, al
01087 macon, al
01101 montgomery, al
01105 perry, al
01109 pike, al
01123 tallapoosa, al

morgantown wv bea
fairmont wv bea
b061 bea
54001 barbour, wv
54017 doddridge, wv
54033 harrison, wv
54041 lewis, wv
54049 marion, wv
54061 monongalia, wv
54077 preston, wv
54083 randolph, wv
54091 taylor, wv
54093 tucker, wv
54097 upshur, wv

nashville tn bea
b054 bea
21003 allen, ky
21009 barren, ky
21031 butler, ky
21047 christian, ky
21053 clinton, ky
21057 cumberland, ky
21061 edmonson, ky
21141 logan, ky
21169 metcalfe, ky
21171 monroe, ky
21213 simpson, ky
21219 todd, ky
21221 trigg, ky
21227 warren, ky
47003 bedford, tn
47015 cannon, tn
47021 cheatham, tn
47027 clay, tn
47031 coffee, tn
47037 davidson, tn
47041 de kalb, tn
47043 dickson, tn

nashville tn bea (cont)
47051 franklin, tn
47055 giles, tn
47081 hickman, tn
47083 houston, tn
47085 humphreys, tn
47087 jackson, tn
47099 lawrence, tn
47101 lewis, tn
47111 macon, tn
47117 marshall, tn
47119 maury, tn
47125 montgomery, tn
47127 moore, tn
47133 overton, tn
47135 perry, tn
47137 pickett, tn
47141 putnam, tn
47147 robertson, tn
47149 rutherford, tn
47159 smith, tn
47161 stewart, tn
47165 sumner, tn
47169 trousdale, tn
47175 van buren, tn
47177 warren, tn
47181 wayne, tn
47185 white, tn
47187 williamson, tn
47189 wilson, tn

new orleans la bea
new orleans bea
b113 bea
22007 assumption, la
22051 jefferson, la
22057 lafourche, la
22071 orleans, la
22075 plaquemines, la
22087 st bernard, la
22089 st charles, la
22093 st james, la
22095 st john the baptist, la
22103 st tammany, la
22105 tangipahoa, la
22109 terrebonne, la
22117 washington, la
28035 forrest, ms
28045 hancock, ms
28047 harrison, ms
28073 lamar, ms
28091 marion, ms
28109 pearl river, ms
28111 perry, ms
28113 pike, ms

new orleans la bea (cont)
28131 stone, ms
28147 walthall, ms

new york ny bea
new york bea
b012 bea
09001 fairfield, ct
34003 bergen, nj
34013 essex, nj
34017 hudson, nj
34019 hunterdon, nj
34023 middlesex, nj
34025 monmouth, nj
34027 morris, nj
34029 ocean, nj
34031 passaic, nj
34035 somerset, nj
34037 sussex, nj
34039 union, nj
36005 bronx, ny
36027 dutchess, ny
36047 kings, ny
36059 nassau, ny
36061 new york, ny
36071 orange, ny
36079 putnam, ny
36081 queens, ny
36085 richmond, ny
36087 rockland, ny
36103 suffolk, ny
36105 sullivan, ny
36111 ulster, ny
36119 westchester, ny
42103 pike, pa

norfolk va bea
virginia beach va bea
newport news va bea
b023 bea
37015 bertie, nc
37029 camden, nc
37041 chowan, nc
37053 currituck, nc
37073 gates, nc
37091 hertford, nc
37139 pasquotank, nc
37143 perquimans, nc
51073 gloucester, va
51093 isle of wight, va
51095 james city, va
51115 mathews, va
51119 middlesex, va
51175 southampton, va
51181 surry, va
51199 york, va

norfolk va bea (cont)
51550 chesapeake city, va
51620 franklin city, va
51650 hampton city, va
51700 newport news city, va
51710 norfolk city, va
51740 portsmouth city, va
51800 suffolk city, va
51810 virginia beach city, va
51830 williamsburg city, va

odessa tx bea
midland tx bea
b132 bea
48003 andrews, tx
48103 crane, tx
48135 ector, tx
48173 glasscock, tx
48227 howard, tx
48301 loving, tx
48317 martin, tx
48329 midland, tx
48371 pecos, tx
48389 reeves, tx
48461 upton, tx
48475 ward, tx
48495 winkler, tx

oklahoma city ok bea
oklahoma city bea
b137 bea
40003 alfalfa, ok
40005 atoka, ok
40009 beckham, ok
40011 blaine, ok
40015 caddo, ok
40017 canadian, ok
40019 carter, ok
40027 cleveland, ok
40029 coal, ok
40039 custer, ok
40043 dewey, ok
40045 ellis, ok
40047 garfield, ok
40049 garvin, ok
40051 grady, ok
40053 grant, ok
40059 harper, ok
40063 hughes, ok
40069 johnston, ok
40073 kingfisher, ok
40081 lincoln, ok
40083 logan, ok
40085 love, ok
40087 mc clain, ok
40093 major, ok

oklahoma city ok bea (cont)
40095 marshall, ok
40099 murray, ok
40107 okfuskee, ok
40109 oklahoma, ok
40123 pontotoc, ok
40125 pottawatomie, ok
40129 roger mills, ok
40133 seminole, ok
40149 washita, ok
40151 woods, ok
40153 woodward, ok

omaha ne bea
b143 bea
19003 adams, ia
19009 audubon, ia
19029 cass, ia
19071 fremont, ia
19085 harrison, ia
19129 mills, ia
19137 montgomery, ia
19145 page, ia
19155 pottawattamie, ia
19165 shelby, ia
19173 taylor, ia
31021 burt, ne
31025 cass, ne
31037 colfax, ne
31053 dodge, ne
31055 douglas, ne
31141 platte, ne
31153 sarpy, ne
31155 saunders, ne
31177 washington, ne

orlando fl bea
melbourne fl bea
daytona beach fl bea
daytona beach bea
b042 bea
12009 brevard, fl
12035 flagler, fl
12069 lake, fl
12095 orange, fl
12097 osceola, fl
12117 seminole, fl
12119 sumter, fl
12127 volusia, fl

paducah ky bea
b056 bea
17069 hardin, il
17127 massac, il
17151 pope, il
21007 ballard, ky

paducah ky bea (cont)
21033 caldwell, ky
21035 calloway, ky
21039 carlisle, ky
21055 crittenden, ky
21075 fulton, ky
21083 graves, ky
21105 hickman, ky
21139 livingston, ky
21143 lyon, ky
21145 mc cracken, ky
21157 marshall, ky

parkersburg wv bea
b062 bea
39167 washington, oh
54073 pleasants, wv
54085 ritchie, wv
54105 wirt, wv
54107 wood, wv

pensacola fl bea
panama city fl bea
b046 bea
12005 bay, fl
12033 escambia, fl
12045 gulf, fl
12059 holmes, fl
12091 okaloosa, fl
12113 santa rosa, fl
12131 walton, fl
12133 washington, fl

peoria il bea
b087 bea
17057 fulton, il
17095 knox, il
17109 mc donough, il
17113 mc lean, il
17123 marshall, il
17125 mason, il
17143 peoria, il
17169 schuyler, il
17175 stark, il
17179 tazewell, il
17187 warren, il
17203 woodford, il

philadelphia pa bea
philadelphia bea
b018 bea
10001 kent, de
10003 new castle, de
10005 sussex, de
24015 cecil, md
34001 atlantic, nj

philadelphia pa bea (cont)
34005 burlington, nj
34007 camden, nj
34009 cape may, nj
34011 cumberland, nj
34015 gloucester, nj
34021 mercer, nj
34033 salem, nj
34041 warren, nj
42011 berks, pa
42017 bucks, pa
42025 carbon, pa
42029 chester, pa
42045 delaware, pa
42077 lehigh, pa
42091 montgomery, pa
42095 northampton, pa
42101 philadelphia, pa
42107 schuylkill, pa

phoenix az bea
b162 bea
04001 apache, az
04005 coconino, az
04007 gila, az
04013 maricopa, az
04015 mohave, az
04017 navajo, az
04021 pinal, az
04025 yavapai, az
04027 yuma, az

pittsburgh pa bea
b016 bea
24001 allegany, md
24023 garrett, md
42003 allegheny, pa
42005 armstrong, pa
42007 beaver, pa
42009 bedford, pa
42013 blair, pa
42019 butler, pa
42021 cambria, pa
42051 fayette, pa
42059 greene, pa
42063 indiana, pa
42111 somerset, pa
42125 washington, pa
42129 westmoreland, pa
54057 mineral, wv

pocatello id bea
idaho falls id bea
b166 bea
16005 bannock, id
16011 bingham, id

pocatello id bea (cont)
16013 blaine, id
16019 bonneville, id
16023 butte, id
16025 camas, id
16029 caribou, id
16031 cassia, id
16033 clark, id
16037 custer, id
16043 fremont, id
16047 gooding, id
16051 jefferson, id
16053 jerome, id
16059 lemhi, id
16063 lincoln, id
16065 madison, id
16067 minidoka, id
16077 power, id
16081 teton, id
16083 twin falls, id
56039 teton, wy

portland me bea
lewiston me bea
b002 bea
23001 androscoggin, me
23005 cumberland, me
23007 franklin, me
23011 kennebec, me
23013 knox, me
23015 lincoln, me
23017 oxford, me
23023 sagadahoc, me
23025 somerset, me
23031 york, me

portland or bea
b172 bea
41003 benton, or
41005 clackamas, or
41007 clatsop, or
41009 columbia, or
41013 crook, or
41017 deschutes, or
41027 hood river, or
41031 jefferson, or
41041 lincoln, or
41043 linn, or
41047 marion, or
41051 multnomah, or
41053 polk, or
41055 sherman, or
41057 tillamook, or
41065 wasco, or
41067 washington, or
41071 yamhill, or

portland or bea (cont)
53011 clark, wa
53015 cowlitz, wa
53039 klickitat, wa
53059 skamania, wa
53069 wahkiakum, wa

providence ri bea
warwick ri bea
pawtucket ri bea
b005 bea
44001 bristol, ri
44003 kent, ri
44005 newport, ri
44007 providence, ri
44009 washington, ri

quincy il bea
b086 bea
17001 adams, il
17009 brown, il
17149 pike, il
29111 lewis, mo
29127 marion, mo
29163 pike, mo
29173 ralls, mo

raleigh nc bea
durham nc bea
b027 bea
37037 chatham, nc
37063 durham, nc
37069 franklin, nc
37077 granville, nc
37085 harnett, nc
37101 johnston, nc
37105 lee, nc
37135 orange, nc
37145 person, nc
37181 vance, nc
37183 wake, nc
37185 warren, nc

rapid city sd bea
b146 bea
46007 bennett, sd
46017 buffalo, sd
46019 butte, sd
46021 campbell, sd
46031 corson, sd
46033 custer, sd
46041 dewey, sd
46047 fall river, sd
46055 haakon, sd
46063 harding, sd
46065 hughes, sd

rapid city sd bea (cont)
46069 hyde, sd
46071 jackson, sd
46075 jones, sd
46081 lawrence, sd
46085 lyman, sd
46093 meade, sd
46095 mellette, sd
46103 pennington, sd
46105 perkins, sd
46107 potter, sd
46113 shannon, sd
46117 stanley, sd
46119 sully, sd
46121 todd, sd
46123 tripp, sd
46129 walworth, sd
46131 washabaugh, sd
46137 ziebach, sd
56011 crook, wy
56027 niobrara, wy
56045 weston, wy

redding ca bea
b174 bea
06035 lassen, ca
06049 modoc, ca
06063 plumas, ca
06089 shasta, ca
06093 siskiyou, ca
06103 tehama, ca

reno nv bea
b164 bea
32001 churchill, nv
32005 douglas, nv
32007 elko, nv
32011 eureka, nv
32013 humboldt, nv
32015 lander, nv
32019 lyon, nv
32021 mineral, nv
32027 pershing, nv
32029 storey, nv
32031 washoe, nv
32033 white pine, nv
32510 carson city city, nv

richland wa bea
b169 bea
41001 baker, or
41021 gilliam, or
41023 grant, or
41049 morrow, or
41059 umatilla, or
41061 union, or

richland wa bea (cont)
41063 wallowa, or
41069 wheeler, or
53005 benton, wa
53021 franklin, wa
53071 walla walla, wa

richmond va bea
b022 bea
51003 albemarle, va
51007 amelia, va
51025 brunswick, va
51029 buckingham, va
51033 caroline, va
51036 charles city, va
51037 charlotte, va
51041 chesterfield, va
51049 cumberland, va
51053 dinwiddie, va
51057 essex, va
51065 fluvanna, va
51075 goochland, va
51079 greene, va
51081 greensville, va
51083 halifax, va
51085 hanover, va
51087 henrico, va
51097 king and queen, va
51101 king william, va
51103 lancaster, va
51109 louisa, va
51111 lunenberg, va
51113 madison, va
51117 mecklenburg, va
51127 new kent, va
51133 northumberland, va
51135 nottoway, va
51137 orange, va
51145 powhatan, va
51147 prince edward, va
51149 prince george, va
51159 richmond, va
51183 sussex, va
51540 charlottesville city, va
51570 colonial heights city, va
51595 emporia city, va
51670 hopewell city, va
51730 petersburg city, va
51760 richmond city, va
51780 south boston city, va

roanoke va bea
lynchburg va bea
b021 bea
51005 alleghany, va
51009 amherst, va

roanoke va bea (cont)
51011 appomattox, va
51015 augusta, va
51017 bath, va
51019 bedford, va
51021 bland, va
51023 botetourt, va
51031 campbell, va
51035 carroll, va
51045 craig, va
51063 floyd, va
51067 franklin, va
51071 giles, va
51077 grayson, va
51089 henry, va
51091 highland, va
51121 montgomery, va
51125 nelson, va
51141 patrick, va
51143 pittsylvania, va
51155 pulaski, va
51161 roanoke, va
51163 rockbridge, va
51165 rockingham, va
51197 wythe, va
51515 bedford city, va
51530 buena vista city, va
51560 clifton forge city, va
51580 covington city, va
51590 danville city, va
51640 galax city, va
51660 harrisonburg city, va
51678 lexington city, va
51680 lynchburg city, va
51690 martinsville city, va
51750 radford city, va
51770 roanoke city, va
51775 salem city, va
51790 staunton city, va
51820 waynesboro city, va
54071 pendleton, wv

rochester mn bea
b097 bea
27039 dodge, mn
27045 fillmore, mn
27047 freeborn, mn
27099 mower, mn
27109 olmsted, mn
27147 steele, mn
27157 wabasha, mn

rochester ny bea
b009 bea
36037 genesee, ny
36051 livingston, ny

rochester ny bea (cont)
36055 monroe, ny
36069 ontario, ny
36073 orleans, ny
36099 seneca, ny
36117 wayne, ny
36123 yates, ny

rockford il bea
b088 bea
17007 boone, il
17103 lee, il
17141 ogle, il
17177 stephenson, il
17201 winnebago, il
55105 rock, wi

rocky mount nc bea
wilson nc bea
greenville nc bea
b024 bea
37013 beaufort, nc
37031 carteret, nc
37049 craven, nc
37055 dare, nc
37065 edgecombe, nc
37079 greene, nc
37083 halifax, nc
37095 hyde, nc
37103 jones, nc
37107 lenoir, nc
37117 martin, nc
37127 nash, nc
37131 northampton, nc
37137 pamlico, nc
37147 pitt, nc
37177 tyrrell, nc
37187 washington, nc
37191 wayne, nc
37195 wilson, nc

sacramento ca bea
b177 bea
06007 butte, ca
06011 colusa, ca
06017 el dorado, ca
06021 glenn, ca
06057 nevada, ca
06061 placer, ca
06067 sacramento, ca
06091 sierra, ca
06101 sutter, ca
06113 yolo, ca
06115 yuba, ca

saginaw mi bea
bay city mi bea
b072 bea

26001	alcona, mi
26007	alpena, mi
26011	arenac, mi
26017	bay, mi
26031	cheboygan, mi
26033	chippewa, mi
26035	clare, mi
26039	crawford, mi
26051	gladwin, mi
26057	gratiot, mi
26063	huron, mi
26069	iosco, mi
26073	isabella, mi
26095	luce, mi
26097	mackinac, mi
26111	midland, mi
26119	montmorency, mi
26129	ogemaw, mi
26135	oscoda, mi
26137	otsego, mi
26141	presque isle, mi
26143	roscommon, mi
26145	saginaw, mi
26157	tuscola, mi

salina ks bea
b140 bea

20023	cheyenne, ks
20029	cloud, ks
20039	decatur, ks
20041	dickinson, ks
20051	ellis, ks
20053	ellsworth, ks
20063	gove, ks
20065	graham, ks
20089	jewell, ks
20105	lincoln, ks
20109	logan, ks
20123	mitchell, ks
20137	norton, ks
20141	osborne, ks
20143	ottawa, ks
20147	phillips, ks
20153	rawlins, ks
20157	republic, ks
20163	rooks, ks
20167	russell, ks
20169	saline, ks
20179	sheridan, ks
20181	sherman, ks
20183	smith, ks
20193	thomas, ks

salina ks bea (cont)

20195	trego, ks
20199	wallace, ks

salt lake city ut bea
ogden ut bea
b165 bea

16007	bear lake, id
16041	franklin, id
16071	oneida, id
49003	box elder, ut
49005	cache, ut
49007	carbon, ut
49009	daggett, ut
49011	davis, ut
49013	duchesne, ut
49015	emery, ut
49023	juab, ut
49027	millard, ut
49029	morgan, ut
49031	piute, ut
49033	rich, ut
49035	salt lake, ut
49039	sanpete, ut
49041	sevier, ut
49043	summit, ut
49045	tooele, ut
49047	uintah, ut
49049	utah, ut
49051	wasatch, ut
49055	wayne, ut
49057	weber, ut
56023	lincoln, wy
56035	sublette, wy
56037	sweetwater, wy
56041	uinta, wy

san angelo tx bea
b128 bea

48081	coke, tx
48095	concho, tx
48105	crockett, tx
48235	irion, tx
48267	kimble, tx
48307	mc culloch, tx
48319	mason, tx
48327	menard, tx
48383	reagan, tx
48399	runnels, tx
48411	san saba, tx
48413	schleicher, tx
48431	sterling, tx
48435	sutton, tx
48443	terrell, tx
48451	tom green, tx

san antonio tx bea
b129 bea
48013 atascosa, tx
48019 bandera, tx
48029 bexar, tx
48091 comal, tx
48127 dimmit, tx
48137 edwards, tx
48163 frio, tx
48171 gillespie, tx
48177 gonzales, tx
48187 guadalupe, tx
48247 jim hogg, tx
48255 karnes, tx
48259 kendall, tx
48265 kerr, tx
48271 kinney, tx
48283 la salle, tx
48311 mc mullen, tx
48323 maverick, tx
48325 medina, tx
48385 real, tx
48463 uvalde, tx
48465 val verde, tx
48479 webb, tx
48493 wilson, tx
48505 zapata, tx
48507 zavala, tx

san diego ca bea
b181 bea
06025 imperial, ca
06073 san diego, ca

san francisco ca bea
oakland ca bea
san jose ca bea
b176 bea
06001 alameda, ca
06013 contra costa, ca
06033 lake, ca
06041 marin, ca
06045 mendocino, ca
06053 monterey, ca
06055 napa, ca
06069 san benito, ca
06075 san francisco, ca
06081 san mateo, ca
06085 santa clara, ca
06087 santa cruz, ca
06095 solano, ca
06097 sonoma, ca

savannah ga bea
savannah bea
b039 bea
13001 appling, ga
13003 atkinson, ga
13005 bacon, ga
13029 bryan, ga
13031 bulloch, ga
13043 candler, ga
13051 chatham, ga
13069 coffee, ga
13103 effingham, ga
13109 evans, ga
13161 jeff davis, ga
13179 liberty, ga
13183 long, ga
13191 mc intosh, ga
13209 montgomery, ga
13251 screven, ga
13267 tattnall, ga
13279 toombs, ga
13305 wayne, ga
45013 beaufort, sc
45049 hampton, sc
45053 jasper, sc

scotts bluff ne bea
b145 bea
31007 banner, ne
31013 box butte, ne
31033 cheyenne, ne
31045 dawes, ne
31049 deuel, ne
31069 garden, ne
31105 kimball, ne
31123 morrill, ne
31157 scotts bluff, ne
31161 sheridan, ne
31165 sioux, ne
56015 goshen, wy

scranton pa bea
wilkes-barre pa bea
b013 bea
42037 columbia, pa
42069 lackawanna, pa
42079 luzerne, pa
42089 monroe, pa
42127 wayne, pa
42131 wyoming, pa

seattle wa bea
b171 bea
53009 clallam, wa
53027 grays harbor, wa
53029 island, wa

seattle wa bea (cont)
53031 jefferson, wa
53033 king, wa
53035 kitsap, wa
53041 lewis, wa
53045 mason, wa
53049 pacific, wa
53053 pierce, wa
53055 san juan, wa
53057 skagit, wa
53061 snohomish, wa
53067 thurston, wa
53073 whatcom, wa

shreveport la bea
b117 bea
22009 avoyelles, la
22013 bienville, la
22015 bossier, la
22017 caddo, la
22027 claiborne, la
22031 de soto, la
22043 grant, la
22069 natchitoches, la
22079 rapides, la
22081 red river, la
22085 sabine, la
22119 webster, la
22127 winn, la

sioux city ia bea
sioux city bea
b103 bea
19035 cherokee, ia
19047 crawford, ia
19093 ida, ia
19133 monona, ia
19141 o brien, ia
19149 plymouth, ia
19167 sioux, ia
19193 woodbury, ia
31003 antelope, ne
31027 cedar, ne
31039 cuming, ne
31043 dakota, ne
31051 dixon, ne
31107 knox, ne
31119 madison, ne
31139 pierce, ne
31167 stanton, ne
31173 thurston, ne
31179 wayne, ne
46009 bon homme, sd
46027 clay, sd
46127 union, sd
46135 yankton, sd

sioux falls sd bea
b147 bea
19119 lyon, ia
19143 osceola, ia
27033 cottonwood, mn
27063 jackson, mn
27081 lincoln, mn
27083 lyon, mn
27101 murray, mn
27105 nobles, mn
27117 pipestone, mn
27127 redwood, mn
27133 rock, mn
46003 aurora, sd
46005 beadle, sd
46011 brookings, sd
46015 brule, sd
46023 charles mix, sd
46035 davison, sd
46043 douglas, sd
46053 gregory, sd
46059 hand, sd
46061 hanson, sd
46067 hutchinson, sd
46073 jerauld, sd
46077 kingsbury, sd
46079 lake, sd
46083 lincoln, sd
46087 mc cook, sd
46097 miner, sd
46099 minnehaha, sd
46101 moody, sd
46111 sanborn, sd
46125 turner, sd

south bend in bea
south bend bea
b075 bea
18039 elkhart, in
18049 fulton, in
18085 kosciusko, in
18087 lagrange, in
18099 marshall, in
18141 st joseph, in
26021 berrien, mi
26027 cass, mi
26149 st joseph, mi

spokane wa bea
b168 bea
16009 benewah, id
16017 bonner, id
16021 boundary, id
16035 clearwater, id
16049 idaho, id
16055 kootenai, id

spokane wa bea (cont)
16057 latah, id
16061 lewis, id
16069 nez perce, id
16079 shoshone, id
53001 adams, wa
53003 asotin, wa
53013 columbia, wa
53019 ferry, wa
53023 garfield, wa
53043 lincoln, wa
53051 pend oreille, wa
53063 spokane, wa
53065 stevens, wa
53075 whitman, wa

springfield il bea
decatur il bea
b085 bea
17017 cass, il
17021 christian, il
17039 de witt, il
17107 logan, il
17115 macon, il
17129 menard, il
17137 morgan, il
17139 moultrie, il
17167 sangamon, il
17171 scott, il
17173 shelby, il

springfield mo bea
b108 bea
20001 allen, ks
20011 bourbon, ks
20021 cherokee, ks
20037 crawford, ks
20099 labette, ks
20125 montgomery, ks
20133 neosho, ks
20205 wilson, ks
20207 woodson, ks
29009 barry, mo
29011 barton, mo
29039 cedar, mo
29043 christian, mo
29057 dade, mo
29059 dallas, mo
29067 douglas, mo
29077 greene, mo
29085 hickory, mo
29091 howell, mo
29097 jasper, mo
29105 laclede, mo
29109 lawrence, mo
29119 mc donald, mo

springfield mo bea (cont)
29145 newton, mo
29149 oregon, mo
29153 ozark, mo
29167 polk, mo
29169 pulaski, mo
29185 st clair, mo
29203 shannon, mo
29209 stone, mo
29213 taney, mo
29215 texas, mo
29217 vernon, mo
29225 webster, mo
29229 wright, mo
40035 craig, ok
40115 ottawa, ok

st louis mo bea
st louis bea
saint louis bea
b107 bea
17003 alexander, il
17005 bond, il
17013 calhoun, il
17025 clay, il
17027 clinton, il
17049 effingham, il
17051 fayette, il
17055 franklin, il
17061 greene, il
17077 jackson, il
17079 jasper, il
17081 jefferson, il
17083 jersey, il
17087 johnson, il
17117 macoupin, il
17119 madison, il
17121 marion, il
17133 monroe, il
17135 montgomery, il
17145 perry, il
17153 pulaski, il
17157 randolph, il
17159 richland, il
17163 st clair, il
17181 union, il
17189 washington, il
17191 wayne, il
17199 williamson, il
29017 bollinger, mo
29023 butler, mo
29031 cape girardeau, mo
29035 carter, mo
29055 crawford, mo
29065 dent, mo
29071 franklin, mo

st louis mo bea (cont)
29073 gasconade, mo
29093 iron, mo
29099 jefferson, mo
29113 lincoln, mo
29123 madison, mo
29125 maries, mo
29133 mississippi, mo
29139 montgomery, mo
29157 perry, mo
29161 phelps, mo
29179 reynolds, mo
29181 ripley, mo
29183 st charles, mo
29187 st francois, mo
29189 st louis, mo
29193 ste genevieve, mo
29201 scott, mo
29207 stoddard, mo
29219 warren, mo
29221 washington, mo
29223 wayne, mo
29510 st louis city, mo

stockton ca bea
modesto ca bea
b178 bea
06003 alpine, ca
06005 amador, ca
06009 calaveras, ca
06043 mariposa, ca
06047 merced, ca
06077 san joaquin, ca
06099 stanislaus, ca
06109 tuolumne, ca

syracuse ny bea
utica ny bea
b008 bea
36011 cayuga, ny
36023 cortland, ny
36033 franklin, ny
36043 herkimer, ny
36045 jefferson, ny
36049 lewis, ny
36053 madison, ny
36065 oneida, ny
36067 onondaga, ny
36075 oswego, ny
36089 st lawrence, ny

tallahassee fl bea
tallahassee bea
b045 bea
12013 calhoun, fl
12037 franklin, fl

tallahassee fl bea (cont)
12039 gadsden, fl
12063 jackson, fl
12065 jefferson, fl
12073 leon, fl
12077 liberty, fl
12079 madison, fl
12123 taylor, fl
12129 wakulla, fl

tampa fl bea
st petersburg fl bea
b044 bea
12015 charlotte, fl
12017 citrus, fl
12021 collier, fl
12027 de soto, fl
12049 hardee, fl
12053 hernando, fl
12055 highlands, fl
12057 hillsborough, fl
12071 lee, fl
12081 manatee, fl
12101 pasco, fl
12103 pinellas, fl
12105 polk, fl
12115 sarasota, fl

terre haute in bea
terre haute bea
b081 bea
17023 clark, il
17033 crawford, il
18021 clay, in
18121 parke, in
18153 sullivan, in
18165 vermillion, in
18167 vigo, in

texarkana tx bea
texarkana bea
b119 bea
05027 columbia, ar
05057 hempstead, ar
05061 howard, ar
05073 lafayette, ar
05081 little river, ar
05091 miller, ar
05099 nevada, ar
05109 pike, ar
05133 sevier, ar
48037 bowie, tx
48063 camp, tx
48067 cass, tx
48277 lamar, tx
48343 morris, tx

texarkana tx bea (cont)
48387 red river, tx
48449 titus, tx

toledo oh bea
b070 bea
26091 lenawee, mi
26115 monroe, mi
39051 fulton, oh
39063 hancock, oh
39069 henry, oh
39095 lucas, oh
39123 ottawa, oh
39143 sandusky, oh
39147 seneca, oh
39173 wood, oh
39175 wyandot, oh

topeka ks bea
b141 bea
20027 clay, ks
20031 coffey, ks
20061 geary, ks
20085 jackson, ks
20087 jefferson, ks
20111 lyon, ks
20117 marshall, ks
20127 morris, ks
20131 nemaha, ks
20139 osage, ks
20149 pottawatomie, ks
20161 riley, ks
20177 shawnee, ks
20197 wabaunsee, ks
20201 washington, ks

tucson az bea
b161 bea
04003 cochise, az
04009 graham, az
04011 greenlee, az
04019 pima, az
04023 santa cruz, az

tulsa ok bea
b138 bea
40021 cherokee, ok
40037 creek, ok
40071 kay, ok
40091 mc intosh, ok
40097 mayes, ok
40101 muskogee, ok
40103 noble, ok
40105 nowata, ok
40111 okmulgee, ok
40113 osage, ok

tulsa ok bea (cont)
40117 pawnee, ok
40119 payne, ok
40131 rogers, ok
40143 tulsa, ok
40145 wagoner, ok
40147 washington, ok

tyler tx bea
longview tx bea
b120 bea
48001 anderson, tx
48005 angelina, tx
48073 cherokee, tx
48183 gregg, tx
48203 harrison, tx
48213 henderson, tx
48225 houston, tx
48315 marion, tx
48347 nacogdoches, tx
48365 panola, tx
48401 rusk, tx
48405 san augustine, tx
48419 shelby, tx
48423 smith, tx
48459 upshur, tx
48499 wood, tx

waco tx bea
killeen tx bea
temple tx bea
b124 bea
48027 bell, tx
48035 bosque, tx
48099 coryell, tx
48145 falls, tx
48161 freestone, tx
48193 hamilton, tx
48217 hill, tx
48281 lampasas, tx
48293 limestone, tx
48309 mc lennan, tx
48331 milam, tx
48333 mills, tx

washington dc bea
district of columbia bea
dc bea
b020 bea
11000 district of columbia
24009 calvert, md
24017 charles, md
24021 frederick, md
24031 montgomery, md
24033 prince georges, md
24037 st marys, md

washington dc bea (cont)
24043 washington, md
51013 arlington, va
51043 clarke, va
51047 culpeper, va
51059 fairfax, va
51061 fauquier, va
51069 frederick, va
51099 king george, va
51107 loudoun, va
51139 page, va
51153 prince william, va
51157 rappahannock, va
51171 shenandoah, va
51177 spotsylvania, va
51179 stafford, va
51187 warren, va
51193 westmoreland, va
51510 alexandria city, va
51600 fairfax city, va
51610 falls church city, va
51630 fredericksburg city, va
51840 winchester city, va
54003 berkeley, wv
54023 grant, wv
54027 hampshire, wv
54031 hardy, wv
54037 jefferson, wv
54065 morgan, wv

waterloo ia bea
b101 bea
19013 black hawk, ia
19017 bremer, ia
19019 buchanan, ia
19023 butler, ia
19033 cerro gordo, ia
19037 chickasaw, ia
19065 fayette, ia
19067 floyd, ia
19069 franklin, ia
19075 grundy, ia
19081 hancock, ia
19083 hardin, ia
19089 howard, ia
19131 mitchell, ia
19189 winnebago, ia
19195 worth, ia

wausau wi bea
b093 bea
55019 clark, wi
55067 langlade, wi
55069 lincoln, wi
55073 marathon, wi
55085 oneida, wi

wausau wi bea (cont)
55097 portage, wi
55099 price, wi
55119 taylor, wi
55125 vilas, wi
55141 wood, wi

wheeling wv bea
steubenville oh bea
weirton oh bea
b063 bea
39013 belmont, oh
39067 harrison, oh
39081 jefferson, oh
39111 monroe, oh
54009 brooke, wv
54029 hancock, wv
54051 marshall, wv
54069 ohio, wv
54095 tyler, wv
54103 wetzel, wv

wichita ks bea
b139 bea
20007 barber, ks
20009 barton, ks
20015 butler, ks
20017 chase, ks
20019 chautauqua, ks
20025 clark, ks
20033 comanche, ks
20035 cowley, ks
20047 edwards, ks
20049 elk, ks
20055 finney, ks
20057 ford, ks
20067 grant, ks
20069 gray, ks
20071 greeley, ks
20073 greenwood, ks
20075 hamilton, ks
20077 harper, ks
20079 harvey, ks
20081 haskell, ks
20083 hodgeman, ks
20093 kearny, ks
20095 kingman, ks
20097 kiowa, ks
20101 lane, ks
20113 mc pherson, ks
20115 marion, ks
20119 meade, ks
20129 morton, ks
20135 ness, ks
20145 pawnee, ks
20151 pratt, ks

wichita ks bea (cont)
20155 reno, ks
20159 rice, ks
20165 rush, ks
20171 scott, ks
20173 sedgwick, ks
20175 seward, ks
20185 stafford, ks
20187 stanton, ks
20189 stevens, ks
20191 sumner, ks
20203 wichita, ks

wichita falls tx bea
b126 bea
48009 archer, tx
48023 baylor, tx
48077 clay, tx
48101 cottle, tx
48155 foard, tx
48197 hardeman, tx
48485 wichita, tx
48487 wilbarger, tx
48503 young, tx

williamsport pa bea
b014 bea
42023 cameron, pa
42027 centre, pa
42033 clearfield, pa
42035 clinton, pa
42047 elk, pa
42065 jefferson, pa
42081 lycoming, pa
42093 montour, pa
42097 northumberland, pa
42109 snyder, pa
42113 sullivan, pa
42119 union, pa

wilmington nc bea
b025 bea
37019 brunswick, nc
37047 columbus, nc
37061 duplin, nc
37129 new hanover, nc
37133 onslow, nc
37141 pender, nc

yakima wa bea
b170 bea
53007 chelan, wa
53017 douglas, wa
53025 grant, wa
53037 kittitas, wa

yakima wa bea (cont)
53047 okanogan, wa
53077 yakima, wa

youngstown oh bea
warren oh bea
b064 bea
39029 columbiana, oh
39099 mahoning, oh
39155 trumbull, oh
42073 lawrence, pa
42085 mercer, pa

APPENDIX F: STANDARD METROPOLITAN STATISTICAL AREAS

(Many of the Standard Metropolitan Statistical Areas [SMSAs] have several names. In EIFS, SMSAs can be referenced by any of the names listed here. Please pay attention to the spelling.)

abilene tx smsa
s0040 smsa
  48059 callahan, tx
  48253 jones, tx
  48441 taylor, tx

akron oh smsa
akron smsa
s0080 smsa
  39133 portage, oh
  39153 summit, oh

albany ga smsa
s0120 smsa
  13095 dougherty, ga
  13177 lee, ga

albany ny smsa
schenectady ny smsa
troy ny smsa
s0160 smsa
  36001 albany, ny
  36057 montgomery, ny
  36083 rensselaer, ny
  36091 saratoga, ny
  36093 schenectady, ny

albuquerque nm smsa
albuquerque smsa
s0200 smsa
  35001 bernalillo, nm
  35043 sandoval, nm

alexandria la smsa
s0220 smsa
  22043 grant, la
  22079 rapides, la

allentown pa smsa
bethlehem pa smsa
easton pa smsa
s0240 smsa
  34041 warren, nj
  42025 carbon, pa
  42077 lehigh, pa
  42095 northampton, pa

altoona pa smsa
altoona smsa
s0280 smsa
  42013 blair, pa

amarillo tx smsa
amarillo smsa
s0320 smsa
  48375 potter, tx
  48381 randall, tx

anaheim ca smsa
santa ana ca smsa
garden grove ca smsa
anaheim smsa
s0360 smsa
  06059 orange, ca

anchorage ak smsa
anchorage smsa
s0380 smsa
  02020 anchorage, ak

anderson in smsa
s0400 smsa
  18095 madison, in

ann arbor mi smsa
ann arbor smsa
s0440 smsa
  26161 washtenaw, mi

anniston al smsa
s0450 smsa
  01015 calhoun, al

appleton wi smsa
oshkosh wi smsa
oshkosh smsa
s0460 smsa
  55015 calumet, wi
  55087 outagamie, wi
  55139 winnebago, wi

asheville nc smsa
s0480 smsa
37021 buncombe, nc
37115 madison, nc

atlanta ga smsa
atlanta smsa
s0520 smsa
13035 butts, ga
13057 cherokee, ga
13063 clayton, ga
13067 cobb, ga
13089 de kalb, ga
13097 douglas, ga
13113 fayette, ga
13117 forsyth, ga
13121 fulton, ga
13135 gwinnett, ga
13151 henry, ga
13217 newton, ga
13223 paulding, ga
13247 rockdale, ga
13297 walton, ga

atlantic city nj smsa
atlantic city smsa
s0560 smsa
34001 atlantic, nj

augusta ga smsa
s0600 smsa
13073 columbia, ga
13245 richmond, ga
45003 aiken, sc

austin tx smsa
austin smsa
s0640 smsa
48209 hays, tx
48453 travis, tx

bakersfield ca smsa
bakersfield smsa
s0680 smsa
06029 kern, ca

baltimore md smsa
baltimore smsa
s0720 smsa
24003 anne arundel, md
24005 baltimore, md
24013 carroll, md
24025 harford, md
24027 howard, md
24510 baltimore city, md

baton rouge la smsa
baton rouge smsa
s0760 smsa
22005 ascension, la
22033 east baton rouge, la
22063 livingston, la
22121 west baton rouge, la

battle creek mi smsa
battle creek smsa
s0780 smsa
26015 barry, mi
26025 calhoun, mi

bay city mi smsa
bay city smsa
s0800 smsa
26017 bay, mi

beaumont tx smsa
port arthur tx smsa
orange tx smsa
beaumont smsa
port arthur smsa
s0840 smsa
48199 hardin, tx
48245 jefferson, tx
48361 orange, tx

billings mt smsa
billings smsa
s0880 smsa
30111 yellowstone, mt

biloxi ms smsa
gulfport ms smsa
biloxi smsa
s0920 smsa
28045 hancock, ms
28047 harrison, ms
28131 stone, ms

binghamton ny smsa
binghamton smsa
s0960 smsa
36007 broome, ny
36107 tioga, ny
42115 susquehanna, pa

birmingham al smsa
birmingham smsa
s1000 smsa
01073 jefferson, al
01115 st clair, al
01117 shelby, al
01127 walker, al

bloomington in smsa
s1020 smsa
18105 monroe, in

bloomington il smsa
normal il smsa
s1040 smsa
17113 mc lean, il

boise id smsa
boise smsa
s1080 smsa
16001 ada, id

boston ma smsa
lowell ma smsa
brockton ma smsa
lawrence ma smsa
haverhill ma smsa
boston smsa
s1123 smsa
25009 essex, ma
25017 middlesex, ma
25021 norfolk, ma
25023 plymouth, ma
25025 suffolk, ma
33015 rockingham, nh

bridgeport ct smsa
stamford ct smsa
norwalk ct smsa
danbury ct smsa
s1163 smsa
09001 fairfield, ct

brownsville tx smsa
harlingen tx smsa
san benito tx smsa
s1240 smsa
48061 cameron, tx

bryan tx smsa
college station tx smsa
s1260 smsa
48041 brazos, tx

buffalo ny smsa
buffalo smsa
s1280 smsa
36029 erie, ny
36063 niagara, ny

burlington nc smsa
s1300 smsa
37001 alamance, nc

burlington vt smsa
s1299 smsa
50007 chittenden, vt

canton oh smsa
s1320 smsa
39019 carroll, oh
39151 stark, oh

cedar rapids ia smsa
cedar rapids smsa
s1360 smsa
19113 linn, ia

champaign il smsa
urbana il smsa
rantoul il smsa
champaign smsa
s1400 smsa
17019 champaign, il

charleston sc smsa
north charleston sc smsa
s1440 smsa
45015 berkeley, sc
45019 charleston, sc
45035 dorchester, sc

charleston wv smsa
s1480 smsa
54039 kanawha, wv
54079 putnam, wv

charlotte nc smsa
gastonia nc smsa
s1520 smsa
37071 gaston, nc
37119 mecklenburg, nc
37179 union, nc

chattanooga tn smsa
chattanooga smsa
s1560 smsa
13047 catoosa, ga
13083 dade, ga
13295 walker, ga
47065 hamilton, tn
47115 marion, tn
47153 sequatchie, tn

cheyenne wy smsa
cheyenne smsa
s1579 smsa
56021 laramie, wy

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chicago il smsa
chicago smsa
s1600 smsa
   17031  cook, il
   17043  du page, il
   17089  kane, il
   17097  lake, il
   17111  mc henry, il
   17197  will, il

cincinatti oh smsa
cincinatti smsa
s1640 smsa
   18029  dearborn, in
   21015  boone, ky
   21037  campbell, ky
   21117  kenton, ky
   39025  clermont, oh
   39061  hamilton, oh
   39165  warren, oh

clarksville tn smsa
hopkinsville ky smsa
s1660 smsa
   21047  christian, ky
   47125  montgomery, tn

cleveland oh smsa
cleveland smsa
s1680 smsa
   39035  cuyahoga, oh
   39055  geauga, oh
   39085  lake, oh
   39103  medina, oh

colorado springs co smsa
colorado springs smsa
s1720 smsa
   08041  el paso, co
   08119  teller, co

columbia mo smsa
s1740 smsa
   29019  boone, mo

columbia sc smsa
s1760 smsa
   45063  lexington, sc
   45079  richland, sc

columbus ga smsa
s1800 smsa
   01113  russell, al
   13053  chattahoochee, ga
   13510  columbus, ga

columbus oh smsa
s1840 smsa
   39041  delaware, oh
   39045  fairfield, oh
   39049  franklin, oh
   39097  madison, oh
   39129  pickaway, oh

corpus christi tx smsa
corpus christi smsa
s1880 smsa
   48355  nueces, tx
   48409  san patricio, tx

dallas tx smsa
fort worth tx smsa
dallas smsa
fort worth smsa
s1920 smsa
   48085  collin, tx
   48113  dallas, tx
   48121  denton, tx
   48139  ellis, tx
   48221  hood, tx
   48251  johnson, tx
   48257  kaufman, tx
   48367  parker, tx
   48397  rockwall, tx
   48439  tarrant, tx
   48497  wise, tx

davenport ia smsa
rock island il smsa
moline il smsa
davenport smsa
rock island smsa
s1960 smsa
   17073  henry, il
   17161  rock island, il
   19163  scott, ia

dayton oh smsa
dayton smsa
s2000 smsa
   39057  greene, oh
   39109  miami, oh
   39113  montgomery, oh
   39135  preble, oh

daytona beach fl smsa
daytona beach smsa
s2020 smsa
   12127  volusia, fl

decatur il smsa
s2040 smsa
   17115  macon, il
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denver co smsa
boulder co smsa
denver smsa
s2080 smsa
   08001  adams, co
   08005  arapahoe, co
   08013  boulder, co
   08031  denver, co
   08035  douglas, co
   08047  gilpin, co
   08059  jefferson, co

des moines ia smsa
des moines smsa
s2120 smsa
   19153  polk, ia
   19181  warren, ia

detroit mi smsa
detroit smsa
s2160 smsa
   26093  livingston, mi
   26099  macomb, mi
   26125  oakland, mi
   26147  st clair, mi
   26163  wayne, mi

dubuque ia smsa
dubuque smsa
s2200 smsa
   19061  dubuque, ia

duluth mn smsa
superior mn smsa
duluth smsa
s2240 smsa
   27137  st louis, mn
   55031  douglas, wi

eau claire wi smsa
eau claire smsa
s2290 smsa
   55017  chippewa, wi
   55035  eau claire, wi

elmira ny smsa
elmira smsa
s2335 smsa
   36015  chemung, ny

el paso tx smsa
el paso smsa
s2320 smsa
   48141  el paso, tx

erie pa smsa
erie smsa
s2360 smsa
   42049  erie, pa

eugene or smsa
springfield or smsa
eugene smsa
s2400 smsa
   41039  lane, or

evansville in smsa
evansville smsa
s2440 smsa
   18051  gibson, in
   18129  posey, in
   18163  vanderburgh, in
   18173  warrick, in
   21101  henderson, ky

fargo nd smsa
moorhead mn smsa
fargo smsa
moorhead smsa
s2520 smsa
   27027  clay, mn
   38017  cass, nd

fayetteville ar smsa
springdale ar smsa
s2580 smsa
   05007  benton, ar
   05143  washington, ar

fayetteville nc smsa
s2560 smsa
   37051  cumberland, nc

flint mi smsa
flint smsa
s2640 smsa
   26049  genesee, mi
   26087  lapeer, mi
   26155  shiawassee, mi

florence al smsa
s2650 smsa
   01033  colbert, al
   01077  lauderdale, al

fort collins co smsa
fort collins smsa
s2670 smsa
   08069  larimer, co

fort lauderdale fl smsa
hollywood fl smsa
fort lauderdale smsa
s2680 smsa
   12011  broward, fl

fort myers fl smsa
fort myers smsa
s2700 smsa
   12071  lee, fl
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fort smith ar smsa
s2720 smsa
   05033  crawford, ar
   05131  sebastian, ar
   40079  le flore, ok
   40135  sequoyah, ok

fort wayne in smsa
fort wayne smsa
s2760 smsa
   18001  adams, in
   18003  allen, in
   18033  de kalb, in
   18179  wells, in

fresno ca smsa
fresno smsa
s2840 smsa
   06019  fresno, ca

gadsden al smsa
s2880 smsa
   01055  etowah, al

gainesville fl smsa
gainesville smsa
s2900 smsa
   12001  alachua, fl

galveston tx smsa
texas city tx smsa
galveston smsa
s2920 smsa
   48167  galveston, tx

gary in smsa
hammond in smsa
east chicago in smsa
gary smsa
hammond smsa
east chicago smsa
s2960 smsa
   18089  lake, in
   18127  porter, in

grand rapids mi smsa
grand rapids smsa
s3000 smsa
   26081  kent, mi
   26139  ottawa, mi

great falls mt smsa
great falls smsa
s3040 smsa
   30013  cascade, mt

greeley co smsa
greeley smsa
s3060 smsa
   08123  weld, co

green bay wi smsa
green bay smsa
s3080 smsa
   55009  brown, wi

greensboro nc smsa
winston-salem nc smsa
high point nc smsa
winston-salem smsa
s3120 smsa
   37057  davidson, nc
   37067  forsyth, nc
   37081  guilford, nc
   37151  randolph, nc
   37169  stokes, nc
   37197  yadkin, nc

greenville sc smsa
spartanburg sc smsa
s3160 smsa
   45045  greenville, sc
   45077  pickens, sc
   45083  spartanburg, sc

hamilton oh smsa
middletown oh smsa
s3200 smsa
   39017  butler, oh

harrisburg pa smsa
harrisburg smsa
s3240 smsa
   42041  cumberland, pa
   42043  dauphin, pa
   42099  perry, pa

hartford ct smsa
new britain ct smsa
bristol ct smsa
hartford smsa
s3283 smsa
   09003  hartford, ct
   09007  middlesex, ct
   09013  tolland, ct

honolulu hi smsa
honolulu smsa
honolulu ha smsa
s3320 smsa
   15003  honolulu, hi
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houston tx smsa
houston smsa
s3360 smsa
48039 brazoria, tx
48157 fort bend, tx
48201 harris, tx
48291 liberty, tx
48339 montgomery, tx
48473 waller, tx

huntington wv smsa
ashland ky smsa
s3400 smsa
21019 boyd, ky
21089 greenup, ky
39087 lawrence, oh
54011 cabell, wv
54099 wayne, wv

huntsville al smsa
huntsville smsa
s3440 smsa
01083 limestone, al
01089 madison, al
01095 marshall, al

indianapolis in smsa
indianapolis smsa
s3480 smsa
18011 boone, in
18057 hamilton, in
18059 hancock, in
18063 hendricks, in
18081 johnson, in
18097 marion, in
18109 morgan, in
18145 shelby, in

jackson mi smsa
s3520 smsa
26075 jackson, mi

jackson ms smsa
s3560 smsa
28049 hinds, ms
28121 rankin, ms

jacksonville fl smsa
jacksonville smsa
s3600 smsa
12003 baker, fl
12019 clay, fl
12031 duval, fl
12089 nassau, fl
12109 st johns, fl

jersey city nj smsa
jersey city smsa
s3640 smsa
34017 hudson, nj

johnson city tn smsa
kingsport tn smsa
bristol tn smsa
s3660 smsa
47019 carter, tn
47073 hawkins, tn
47163 sullivan, tn
47171 unicoi, tn
47179 washington, tn
51169 scott, va
51191 washington, va
51520 bristol city, va

johnstown pa smsa
s3680 smsa
42021 cambria, pa
42111 somerset, pa

kalamazoo mi smsa
portage mi smsa
kalamazoo smsa
s3720 smsa
26077 kalamazoo, mi
26159 van buren, mi

kankakee il smsa
kankakee smsa
s3740 smsa
17091 kankakee, il

kansas city mo smsa
kansas city ks smsa
kansas city smsa
s3760 smsa
20091 johnson, ks
20209 wyandotte, ks
29037 cass, mo
29047 clay, mo
29095 jackson, mo
29165 platte, mo
29177 ray, mo

kenosha wi smsa
s3800 smsa
55059 kenosha, wi

killeen tx smsa
temple tx smsa
killeen smsa
s3810 smsa
  48027 bell, tx
  48099 coryell, tx

knoxville tn smsa
knoxville smsa
s3840 smsa
  47001 anderson, tn
  47009 blount, tn
  47093 knox, tn
  47173 union, tn

la crosse wi smsa
la crosse smsa
s3870 smsa
  55063 la crosse, wi

lafayette in smsa
west lafayette in smsa
s3920 smsa
  18157 tippecanoe, in

lafayette la smsa
s3880 smsa
  22055 lafayette, la

lake charles la smsa
s3960 smsa
  22019 calcasieu, la

lakeland fl smsa
winter haven fl smsa
s3980 smsa
  12105 polk, fl

lancaster pa smsa
s4000 smsa
  42071 lancaster, pa

lansing mi smsa
east lansing mi smsa
s4040 smsa
  26037 clinton, mi
  26045 eaton, mi
  26065 ingham, mi
  26067 ionia, mi

laredo tx smsa
s4080 smsa
  48479 webb, tx

las vegas nv smsa
las vegas smsa
s4120 smsa
  32003 clark, nv

lawton ok smsa
s4200 smsa
  40031 comanche, ok

lewiston me smsa
auburn me smsa
s4243 smsa
  23001 androscoggin, me

lexington ky smsa
fayette ky smsa
s4280 smsa
  21017 bourbon, ky
  21049 clark, ky
  21067 fayette, ky
  21113 jessamine, ky
  21209 scott, ky
  21239 woodford, ky

lima oh smsa
s4320 smsa
  39003 allen, oh
  39011 auglaize, oh
  39137 putnam, oh
  39161 van wert, oh

lincoln nb smsa
lincoln smsa
s4360 smsa
  31109 lancaster, ne

little rock ar smsa
north little rock ar smsa
little rock smsa
s4400 smsa
  05119 pulaski, ar
  05125 saline, ar

long branch nj smsa
asbury park nj smsa
s4410 smsa
  34025 monmouth, nj

longview tx smsa
s4420 smsa
  48183 gregg, tx
  48203 harrison, tx

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lorain oh smsa
elyria oh smsa
s4440 smsa
   39093  lorain, oh

los angeles ca smsa
long beach ca smsa
los angeles smsa
s4480 smsa
   06037  los angeles, ca

louisville ky smsa
louisville smsa
s4520 smsa
   18019  clark, in
   18043  floyd, in
   21029  bullitt, ky
   21111  jefferson, ky
   21185  oldham, ky

lubbock tx smsa
lubbock smsa
s4600 smsa
   48303  lubbock, tx

lynchburg va smsa
s4640 smsa
   51009  amherst, va
   51011  appomattox, va
   51031  campbell, va
   51680  lynchburg city, va

macon ga smsa
macon smsa
s4680 smsa
   13021  bibb, ga
   13153  houston, ga
   13169  jones, ga
   13289  twiggs, ga

madison wi smsa
s4720 smsa
   55025  dane, wi

manchester nh smsa
nashua nh smsa
s4763 smsa
   33011  hillsborough, nh

mansfield oh smsa
s4800 smsa
   39139  richland, oh

mcallen tx smsa
pharr tx smsa
edinburg tx smsa
s4880 smsa
   48215  hidalgo, tx

melbourne fl smsa
titusville fl smsa
cocoa fl smsa
s4900 smsa
   12009  brevard, fl

memphis tn smsa
memphis smsa
s4920 smsa
   05035  crittenden, ar
   28033  de soto, ms
   47157  shelby, tn
   47167  tipton, tn

miami fl smsa
s5000 smsa
   12025  dade, fl

midland tx smsa
s5040 smsa
   48329  midland, tx

milwaukee wi smsa
milwaukee smsa
s5080 smsa
   55079  milwaukee, wi
   55089  ozaukee, wi
   55131  washington, wi
   55133  waukesha, wi

minneapolis mn smsa
st paul mn smsa
minneapolis smsa
st paul smsa
s5120 smsa
   27003  anoka, mn
   27019  carver, mn
   27025  chisago, mn
   27037  dakota, mn
   27053  hennepin, mn
   27123  ramsey, mn
   27139  scott, mn
   27163  washington, mn
   27171  wright, mn
   55109  st croix, wi
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mobile al smsa
mobile smsa
s5160 smsa
   01003  baldwin, al
   01097  mobile, al

modesto ca smsa
s5170 smsa
   06099  stanislaus, ca

monroe la smsa
s5200 smsa
   22073  ouachita, la

montgomery al smsa
s5240 smsa
   01001  autauga, al
   01051  elmore, al
   01101  montgomery, al

muncie in smsa
s5280 smsa
   18035  delaware, in

muskegon mi smsa
norton shores mi smsa
muskegon heights mi smsa
muskegon smsa
s5320 smsa
   26121  muskegon, mi
   26127  oceana, mi

nashville tn smsa
davidson tn smsa
nashville smsa
s5360 smsa
   47021  cheatham, tn
   47037  davidson, tn
   47043  dickson, tn
   47147  robertson, tn
   47149  rutherford, tn
   47165  sumner, tn
   47187  williamson, tn
   47189  wilson, tn

nassau ny smsa
suffolk ny smsa
s5380 smsa
   36059  nassau, ny
   36103  suffolk, ny

new bedford ma smsa
fall river ma smsa
new bedford smsa
fall river smsa
s5403 smsa
   25005  bristol, ma

new brunswick nj smsa
perth amboy nj smsa
sayreville nj smsa
new brunswick smsa
s5460 smsa
   34023  middlesex, nj

new haven ct smsa
waterbury ct smsa
meriden ct smsa
new haven smsa
s5483 smsa
   09009  new haven, ct

new london ct smsa
norwich ct smsa
new london smsa
norwich smsa
s5523 smsa
   09011  new london, ct

new orleans la smsa
new orleans smsa
s5560 smsa
   22051  jefferson, la
   22071  orleans, la
   22087  st bernard, la
   22103  st tammany, la

new york ny smsa
new york smsa
s5600 smsa
   34003  bergen, nj
   36005  bronx, ny
   36047  kings, ny
   36061  new york, ny
   36079  putnam, ny
   36081  queens, ny
   36085  richmond, ny
   36087  rockland, ny
   36119  westchester, ny

newark nj smsa
newark smsa
s5640 smsa
   34013  essex, nj
   34027  morris, nj
   34035  somerset, nj
   34039  union, nj
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newport news va smsa
hampton va smsa
newport news smsa
s5680 smsa
   51073  gloucester, va
   51095  james city, va
   51199  york, va
   51650  hampton city, va
   51700  newport news city, va
   51830  williamsburg city, va

norfolk va smsa
virginia beach va smsa
portsmouth va smsa
norfolk smsa
s5720 smsa
   37053  currituck, nc
   51550  chesapeake city, va
   51710  norfolk city, va
   51740  portsmouth city, va
   51800  suffolk city, va
   51810  virginia beach city, va

northeast pennsylvania smsa
ne penn smsa
s5745 smsa
   42069  lackawanna, pa
   42079  luzerne, pa
   42089  monroe, pa

odessa tx smsa
s5800 smsa
   48135  ector, tx

oklahoma city ok smsa
oklahoma city smsa
s5880 smsa
   40017  canadian, ok
   40027  cleveland, ok
   40087  mc clain, ok
   40109  oklahoma, ok
   40125  pottawatomie, ok

omaha nb smsa
omaha smsa
s5920 smsa
   19155  pottawattamie, ia
   31055  douglas, ne
   31153  sarpy, ne

orlando fl smsa
orlando smsa
s5960 smsa
   12095  orange, fl
   12097  osceola, fl
   12117  seminole, fl

owensboro ky smsa
s5990 smsa
   21059  daviess, ky

oxnard ca smsa
simi valley ca smsa
ventura ca smsa
oxnard smsa
s6000 smsa
   06111  ventura, ca

parkersburg wv smsa
marietta oh smsa
s6020 smsa
   39167  washington, oh
   54105  wirt, wv
   54107  wood, wv

pascagoula ms smsa
moss point ms smsa
pascagoula smsa
s6025 smsa
   28059  jackson, ms

paterson nj smsa
clifton nj smsa
passaic nj smsa
paterson smsa
s6040 smsa
   34031  passaic, nj

pensacola fl smsa
pensacola smsa
s6080 smsa
   12033  escambia, fl
   12113  santa rosa, fl

peoria il smsa
peoria smsa
s6120 smsa
   17143  peoria, il
   17179  tazewell, il
   17203  woodford, il

petersburg va smsa
colonial heights va smsa
hopewell va smsa
petersburg smsa
s6140 smsa
   51053  dinwiddie, va
   51149  prince george, va
   51570  colonial heights city, va
   51670  hopewell city, va
   51730  petersburg city, va
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philadelphia pa smsa
philadelphia smsa
s6160 smsa
34005 burlington, nj
34007 camden, nj
34015 gloucester, nj
42017 bucks, pa
42029 chester, pa
42045 delaware, pa
42091 montgomery, pa
42101 philadelphia, pa

phoenix az smsa
phoenix smsa
s6200 smsa
04013 maricopa, az

pine bluff ar smsa
pine bluff smsa
s6240 smsa
05069 jefferson, ar

pittsburgh pa smsa
pittsburgh smsa
s6280 smsa
42003 allegheny, pa
42007 beaver, pa
42125 washington, pa
42129 westmoreland, pa

pittsfield ma smsa
s6323 smsa
25003 berkshire, ma

portland me smsa
s6403 smsa
23005 cumberland, me
23023 sagadahoc, me

portland or smsa
s6440 smsa
41005 clackamas, or
41051 multnomah, or
41067 washington, or
53011 clark, wa

poughkeepsie ny smsa
poughkeepsie smsa
s6460 smsa
36027 dutchess, ny

providence ri smsa
warwick ri smsa
pawtucket ri smsa
providence smsa
s6483 smsa
44001 bristol, ri
44003 kent, ri
44007 providence, ri
44009 washington, ri

provo ut smsa
orem ut smsa
provo smsa
s6520 smsa
49049 utah, ut

pueblo co smsa
pueblo smsa
s6560 smsa
08101 pueblo, co

racine wi smsa
racine smsa
s6600 smsa
55101 racine, wi

raleigh nc smsa
durham nc smsa
raleigh smsa
s6640 smsa
37063 durham, nc
37135 orange, nc
37183 wake, nc

reading pa smsa
s6680 smsa
42011 berks, pa

reno nv smsa
reno smsa
s6720 smsa
32031 washoe, nv

richland wa smsa
kennewick wa smsa
s6740 smsa
53005 benton, wa
53021 franklin, wa

richmond va smsa
richmond smsa
s6760 smsa
51036 charles city, va
51041 chesterfield, va
51075 goochland, va
51085 hanover, va

richmond va smsa (cont)
51087 henrico, va
51127 new kent, va
51145 powhatan, va
51760 richmond city, va

riverside ca smsa
san bernardino ca smsa
ontario ca smsa
san bernardino smsa
s6780 smsa
06065 riverside, ca
06071 san bernardino, ca

roanoke va smsa
roanoke smsa
s6800 smsa
51023 botetourt, va
51045 craig, va
51161 roanoke, va
51770 roanoke city, va
51775 salem city, va

rochester mn smsa
s6820 smsa
27109 olmsted, mn

rochester ny smsa
s6840 smsa
36051 livingston, ny
36055 monroe, ny
36069 ontario, ny
36073 orleans, ny
36117 wayne, ny

rockford il smsa
rockford smsa
s6880 smsa
17007 boone, il
17201 winnebago, il

sacramento ca smsa
sacramento smsa
s6920 smsa
06061 placer, ca
06067 sacramento, ca
06113 yolo, ca

saginaw mi smsa
saginaw smsa
s6960 smsa
26145 saginaw, mi

st cloud mn smsa
st cloud smsa
saint cloud smsa
s6980 smsa
27009 benton, mn
27141 sherburne, mn
27145 stearns, mn

st joseph mo smsa
saint joseph mo smsa
s7000 smsa
29003 andrew, mo
29021 buchanan, mo

st louis mo smsa
st louis smsa
saint louis smsa
s7040 smsa
17027 clinton, il
17119 madison, il
17133 monroe, il
17163 st clair, il
29071 franklin, mo
29099 jefferson, mo
29183 st charles, mo
29189 st louis, mo
29510 st louis city, mo

salem or smsa
s7080 smsa
41047 marion, or
41053 polk, or

salinas ca smsa
seaside ca smsa
monterey ca smsa
s7120 smsa
06053 monterey, ca

salt lake city ut smsa
ogden ut smsa
salt lake city smsa
s7160 smsa
49011 davis, ut
49035 salt lake, ut
49045 tooele, ut
49057 weber, ut

san angelo tx smsa
s7200 smsa
48451 tom green, tx

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san antonio tx smsa
san antonio smsa
s7240 smsa
   48029  bexar, tx
   48091  comal, tx
   48187  guadalupe, tx

san diego ca smsa
san diego smsa
s7320 smsa
   06073  san diego, ca

san francisco ca smsa
oakland ca smsa
san francisco smsa
s7360 smsa
   06001  alameda, ca
   06013  contra costa, ca
   06041  marin, ca
   06075  san francisco, ca
   06081  san mateo, ca

san jose ca smsa
san jose smsa
s7400 smsa
   06085  santa clara, ca

santa barbara ca smsa
santa maria ca smsa
lompoc ca smsa
santa barbara smsa
s7480 smsa
   06083  santa barbara, ca

santa cruz ca smsa
s7485 smsa
   06087  santa cruz, ca

santa rosa ca smsa
s7500 smsa
   06097  sonoma, ca

sarasota fl smsa
sarasota smsa
s7510 smsa
   12115  sarasota, fl

savannah ga smsa
savannah smsa
s7520 smsa
   13029  bryan, ga
   13051  chatham, ga
   13103  effingham, ga

seattle wa smsa
everett wa smsa
seattle smsa
s7600 smsa
   53033  king, wa
   53061  snohomish, wa

sherman tx smsa
denison tx smsa
s7640 smsa
   48181  grayson, tx

shreveport la smsa
shreveport smsa
s7680 smsa
   22015  bossier, la
   22017  caddo, la
   22119  webster, la

sioux city ia smsa
sioux city smsa
s7720 smsa
   19193  woodbury, ia
   31043  dakota, ne

sioux falls sd smsa
sioux falls smsa
s7760 smsa
   46099  minnehaha, sd

south bend in smsa
south bend smsa
s7800 smsa
   18099  marshall, in
   18141  st joseph, in

spokane wa smsa
spokane smsa
s7840 smsa
   53063  spokane, wa

springfield il smsa
s7880 smsa
   17129  menard, il
   17167  sangamon, il

springfield ma smsa
chicopee ma smsa
holyoke ma smsa
s8003 smsa
   25013  hampden, ma
   25015  hampshire, ma
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springfield mo smsa
s7920 smsa
29043 christian, mo
29077 greene, mo

springfield oh smsa
s7960 smsa
39021 champaign, oh
39023 clark, oh

steubenville oh smsa
weirton wv smsa
s8080 smsa
39081 jefferson, oh
54009 brooke, wv
54029 hancock, wv

stockton ca smsa
s8120 smsa
06077 san joaquin, ca

syracuse ny smsa
syracuse smsa
s8160 smsa
36053 madison, ny
36067 onondaga, ny
36075 oswego, ny

tacoma wa smsa
tacoma smsa
s8200 smsa
53053 pierce, wa

tallahassee fl smsa
tallahassee smsa
s8240 smsa
12073 leon, fl
12129 wakulla, fl

tampa fl smsa
st petersburg fl smsa
tampa smsa
s8280 smsa
12057 hillsborough, fl
12101 pasco, fl
12103 pinellas, fl

terre haute in smsa
terre haute smsa
s8320 smsa
18021 clay, in
18153 sullivan, in
18165 vermillion, in
18167 vigo, in

texarkana ar smsa
texarkana tx smsa
texarkana smsa
s8360 smsa
05081 little river, ar
05091 miller, ar
48037 bowie, tx

toledo oh smsa
toledo smsa
s8400 smsa
26115 monroe, mi
39051 fulton, oh
39095 lucas, oh
39123 ottawa, oh
39173 wood, oh

topeka ks smsa
topeka smsa
s8440 smsa
20087 jefferson, ks
20139 osage, ks
20177 shawnee, ks

trenton nj smsa
s8480 smsa
34021 mercer, nj

tucson az smsa
tucson smsa
s8520 smsa
04019 pima, az

tulsa ok smsa
tulsa smsa
s8560 smsa
40131 rogers, ok
40037 creek, ok
40097 mayes, ok
40113 osage, ok
40143 tulsa, ok
40145 wagoner, ok

tuscaloosa al smsa
tuscaloosa smsa
s8600 smsa
01125 tuscaloosa, al

tyler tx smsa
s8640 smsa
48423 smith, tx

```
utica ny smsa
rome ny smsa
utica smsa
s8680 smsa
   36043  herkimer, ny
   36065  oneida, ny

vallejo ca smsa
fairfield ca smsa
napa ca smsa
s8720 smsa
   06055  napa, ca
   06095  solano, ca

vineland nj smsa
millville nj smsa
bridgeton nj smsa
s8760 smsa
   34011  cumberland, nj

waco tx smsa
s8800 smsa
   48309  mc lennan, tx

washington dc smsa
washington smsa
dc smsa
district of columbia smsa
s8840 smsa
   11001  district of columbia, dc
   24017  charles, md
   24031  montgomery, md
   24033  prince georges, md
   51013  arlington, va
   51059  fairfax, va
   51107  loudoun, va
   51153  prince william, va
   51510  alexandria city, va
   51600  fairfax city, va
   51610  falls church city, va

waterloo ia smsa
cedar falls ia smsa
waterloo smsa
s8920 smsa
   19013  black hawk, ia

west palm beach fl smsa
boca raton fl smsa
west palm beach smsa
s8960 smsa
   12099  palm beach, fl

wheeling wv smsa
wheeling smsa
s9000 smsa
   39013  belmont, oh
   54051  marshall, wv
   54069  ohio, wv

wichita ks smsa
wichita smsa
s9040 smsa
   20015  butler, ks
   20173  sedgwick, ks

wichita falls tx smsa
wichita falls smsa
s9080 smsa
   48077  clay, tx
   48485  wichita, tx

williamsport pa smsa
s9140 smsa
   42081  lycoming, pa

wilmington de smsa
s9160 smsa
   10003  new castle, de
   24015  cecil, md
   34033  salem, nj

wilmington nc smsa
s9200 smsa
   37019  brunswick, nc
   37129  new hanover, nc

worcester ma smsa
fitchburg ma smsa
leominster ma smsa
worcester smsa
s9243 smsa
   25027  worcester, ma

yakima wa smsa
yakima smsa
s9260 smsa
   53077  yakima, wa

york pa smsa
s9280 smsa
   42001  adams, pa
   42133  york, pa

youngstown oh smsa
warren oh smsa
s9320 smsa
   39099  mahoning, oh
   39155  trumbull, oh
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APPENDIX G: DEFLATING MONETARY VALUES

Introduction

The stated purpose of the EIFS forecast models is to estimate the economic and social changes that can occur in a region because of various types of military actions. Like most regional economic models, EIFS does this with a series of equations whose parametric values are computed with reference to the year 1972. As a result, technical relationships of the EIFS forecast models reflect the economic conditions of 1972. Among the changes that have occurred in the U.S. economy since 1972, probably the most striking has been the high rate of inflation. Normally, inflation is handled in economic models by deflating current monetary values of model inputs in terms of the model's reference year (1972 in this case).

In its simplest form, a monetary value is the product of price and quantity. Therefore, the task of price deflation is to separate the prices from the quantities within monetary values. The importance of this is easily understood in the context of economic models like EIFS. For example, a military action generally leads to changes in demand for locally produced goods and services; this, in turn, leads to changes in demand for locally available productive requirements through the technical relationships that exist between inputs and outputs. Furthermore, these relationships, combined with the local availability of inputs, determines the magnitude of the secondary economic and social effects. The technical relationships of a region's industrial sector (which are so important here) are, in reality, the physical relationships between the commodities that are manufactured and the things that go into their making. Consequently, it is very important that the input information provided by the user be as consistent with the technical relationships of the EIFS forecast models as possible.

Inflation has two effects on measuring the monetary evaluation of physical quantities that are important for properly using the EIFS forecast models. First, inflation reduces the overall purchasing power of expenditures. Second, inflation alters the mix of commodities purchased by expenditures. That is, although inflation generally affects the prices for all goods and services, some commodities are more affected than others. Thus, the relationship between the prices of commodities changes due to the differential effects of inflation (or as economists like to say, "the relative prices of goods and services change"). As this occurs, consumers and producers purchase more of some things and less of others, especially when some "substitutability" between commodities exists. This happens because consumers and producers attempt to reduce the deleterious effects that inflation has on their general welfare or profit situation.

Thus, to use the EIFS forecast models properly (i.e., to account for the effects of inflation since 1972), a user should restate the user-supplied monetary input information in terms that are consistent with the economic conditions of 1972.

Price Indexes

A price index is a number that indicates a relative change in the price of a commodity over time or that shows the relative change in an average of the prices for several goods over time. Price indexes are compiled with reference to a base year (e.g., 1967) and computed in relation to a standard value (e.g., 1967 = 100). Restating a price index in terms of another base year is done by dividing its current value by the price index for the desired base year. The resultant price index can be stated in terms of a standard value (e.g., new base year = 100) by multiplying it by the standard value.

Arithmetically, deflating monetary values is simple: just multiply the monetary value by the ratio of the standard value to the appropriate price index. If the standard value is equal to one, then deflating a monetary value is computed by dividing the monetary value by the price index. This does not mean that actual physical quantity values have been determined (e.g., bushels of wheat). Instead, the monetary values have been made consistent with the prices that existed during the reference period. That is, the effects of price changes since the base period have been removed, revealing the changes in the physical quantities since the base year (expressed in terms of the prices for the base period).

There are two types of price indexes: commodity price indexes and composite price indexes. A commodity price index is a price index for a specific good or service (such as cotton) or for a narrowly defined group of commodities (e.g., household appliances). Deflating the change in expenditures due to a military action by type of product or by industrial sector permits a user to accurately estimate the relevant change in expenditures, because the differential effects of inflation on the relative prices of goods and services are taken into account. Detailed-level commodity price indexes are published monthly in terms of the prices paid by producers and consumers. An analyst should check with the U.S. Bureau of Labor Statistics for copies of the reports, Producer Prices and Price Indexes and CPI Detailed Report. These reports will contain the latest available commodity price indexes.

Whereas a commodity price index reflects the relative price change for a specific commodity or for a narrowly defined group of goods and services, a composite price index is the average relative change in prices for a broad range of commodities over time. Composite price indexes have been compiled for many groups of commodities (e.g., consumer expenditures, construction expenditures, government purchases, and investment expenditures). Appendix H gives a selected group of commonly used composite price indexes. The latest annual values of these indexes will also be available within EIFS. A good source for many composite price indexes is a current issue of the Survey of Current Business, published by the U.S. Bureau of Economic Analysis.

Because composite price indexes are weighted averages of relative price changes for specific commodities, their proper use depends on whether the quantity weights used in their calculation are relevant to the situation to which they are being applied. They can be useful when applied appropriately, especially to deflate expenditures for which the pattern of commodities purchased is not known; however, they can present problems for impact analysis when they are used improperly. For example, probably the most widely used price index for measuring the overall rate of inflation is the Consumer Price

Index (CPI). Evidence for this statement is that the CPI is used to determine the change in benefits paid to recipients of programs such as Social Security, Federal Retirement, many State retirement programs, and even some wage contracts negotiated by unions. But there seems to be little understanding of or little attention paid to the procedures used to compile the CPI. Specifically, the CPI is computed using commodity prices paid by urban residents and weighted by an expenditure pattern that existed during the 1972-1973 period. Thus, it seems inappropriate to deflate the consumer expenditures made by residents of a rural area or military installation expenditures for services and supplies using a CPI, because the expenditure pattern for urban residents is not likely to be the same.

An analyst should also be aware of the time period that the quantity weights for the component commodities are chosen. Composite price indexes that are computed using a fixed set of quantity weights are called "fixed-weighted price indexes." Because the quantity weights are held constant over time, the changes observed in the price index result from price changes. However, the indexes computed by permitting the quantity weights to vary from one period to the next are called "implicit price indexes." As a result, both the weights and prices fluctuate, which makes comparing price indexes for two different years difficult. The most appropriate price index will depend on its use. On the one hand, an implicit price index is good for determining the current rate of inflation, because the most recent set of quantity weights is used; thus, price change implied by an implicit price index reflects the average relative price change for the actual set of goods and services most recently purchased. On the other hand, for computing relative price changes over a period of time (e.g., for deflating expenditures), fixed-weighted price indexes would seem most appropriate when they are available.

APPENDIX H: SELECTED COMPOSITE PRICE INDEXES

	CPI-W			DOC Construction
	All Items	Less Shelter	PPI	Cost Index
	(1967 = 100)		(1967 = 100)	(1972 = 100)
1960	88.7	88.9	94.9	63.6
1961	89.6	89.9	94.5	63.5
1962	90.6	90.9	94.8	64.2
1963	91.7	92.1	94.5	64.8
1964	92.9	93.2	94.7	65.9
1965	94.5	94.6	96.6	67.2
1966	97.2	97.4	99.8	69.8
1967	100.0	100.0	100.0	72.4
1968	104.2	104.1	102.5	76.1
1969	109.8	109.0	106.5	82.7
1970	116.3	114.4	110.4	88.6
1971	121.3	119.3	113.9	94.8
1972	125.3	122.9	119.1	100.0
1973	133.1	131.1	134.7	108.7
1974	147.7	146.1	160.1	126.9
1975	161.2	159.1	174.9	138.4
1976	170.5	168.3	183.0	143.9
1977	181.5	179.1	194.2	143.9
1978	195.3	191.3	209.3	175.7
1979	217.4	210.8	235.6	185.2
1980	247.0	235.5	268.8	206.1
1981	272.3	258.5	293.4	219.4
1982	288.6	273.3	299.3	224.8

Source: Selected issues of the Survey of Current Business.

Gross National Product (GNP) Price Indexes
(1972 = 100)

	GNP	Final Sales	PCE	Investment		Government Purchases
				Non Resid.	Resid.	
1960	70.8	70.7	74.1	74.5	74.9	58.3
1961	71.6	71.5	74.8	74.3	74.7	59.5
1962	72.4	72.4	75.5	74.4	73.9	61.3
1963	73.2	73.2	76.3	74.7	72.6	62.8
1964	74.1	74.0	77.2	75.3	72.6	64.4
1965	75.3	75.3	78.2	76.1	73.5	66.2
1966	77.5	77.4	80.1	77.9	75.3	69.2
1967	79.8	79.8	82.0	80.3	77.5	72.4
1968	83.1	83.0	85.0	83.3	81.0	76.4
1969	87.3	87.2	88.7	87.0	87.8	81.3
1970	91.8	91.7	92.7	91.6	90.6	87.9
1971	96.2	96.2	96.6	96.3	94.9	94.0
1972	100.0	100.0	100.0	100.0	100.0	100.0
1973	106.0	105.9	106.1	104.0	109.2	106.9
1974	115.9	115.8	117.1	116.5	120.5	117.9
1975	126.4	126.3	126.3	132.9	131.2	129.2
1976	133.7	133.6	133.0	139.9	140.8	137.3
1977	142.2	142.1	141.2	148.5	158.0	147.0
1978	153.3	153.2	151.6	160.9	178.4	158.4
1979	167.8	167.7	166.3	177.2	200.8	173.2
1980	184.4	184.3	184.8	196.0	219.5	193.8
1981	201.8	201.8	201.6	213.7	235.0	212.2
1982	214.7	214.7	213.2	225.7	242.4	226.4

Source: Selected issues of the Survey of Current Business.

APPENDIX I: INDUSTRY NAMES AND CODES AVAILABLE FOR CERL-RIMS ANALYSIS

Code	Industry
029999	Agriculture (SIC 01-02)
030000	Forestry & Fishery Products (SIC 081-4,091,097)
040000	Agriculture, Forestry & Fishery Services (SIC 0254,071-3,075-9,085,092)
050000	Iron & Ferroalloy Ores Mining (SIC 101,106)
060100	Copper Ore Mining (SIC 102)
060200	Nonferrous Metal Ores Mining, except Copper (SIC 103-5, pt 108,109)
070000	Coal Mining (SIC 1111,pt 1112,1211,pt 1213)
080000	Crude Petroleum & Natural Gas Mining (SIC 131,132 pt 138)
090000	Stone & Clay Mining & Quarrying (SIC 141-5,pt 148,149)
100000	Chemical & Fertilizer Mineral Mining (SIC 147)
110101	New Residential 1 Unit, Nonfarm (SIC pt 15,pt 17)
110102	New Residential 2-4 Unit, Nonfarm (SIC pt 15,pt 17)
110103	New Residential Garden Apartments (SIC pt 15-17)
110104	New Residential High Rise Apartments (SIC 15-17)
110105	New Residential Add. & Alter., Nonfarm (SIC pt 15, pt 17)
110106	New Hotels & Motels (SIC pt 15-17)
110107	New Dormitories (SIC pt 15,pt 17)
110201	New Industrial Buildings (SIC pt 15-17)
110202	New Office Buildings (SIC pt 15,pt 17)
110203	New Warehouses (SIC pt 15,pt 17)
110204	New Garages & Service Stations (SIC pt 15,pt 17)
110205	New Stores & Restaurants (SIC pt 15,pt 17)
110206	New Religious Buildings (SIC pt 15,pt 17)
110207	New Educational Buildings (SIC pt 15,pt 17)
110208	New Hospitals & Institutional Buildings (SIC pt 15,pt 17)
110209	New Nonfarm Buildings, nec (SIC pt 15,pt 17)
110301	New Telephone & Telegraph Facilities (SIC pt 16,pt 17)
110302	New Railroads (SIC pt 16,pt 17)
110303	New Electric Utility Facilities (SIC pt 16,pt 17)
110304	New Gas Utility Facilities (SIC pt 16,pt 17)
110305	New Petroleum Pipelines (SIC pt 16,pt 17)
110306	New Water Supply Facilities (SIC pt 16,pt 17)
110307	New Sewer System Facilities (SIC pt 16,pt 17)
110308	New Local Transit Facilities (SIC pt 16,pt 17)
110400	New Highways & Streets (SIC pt 16,pt 17)
110501	New Farm Housing Units & Additions (SIC pt 15,pt 17)
110502	New Farm Service Facilities (SIC pt 15,pt 17)
110503	New Petroleum & Natural Gas Well Drilling (SIC pt 138)
110504	New Petroleum, Natural Gas & Solid Mineral Exploration (SIC pt 108,pt 1112,pt 1213,pt 138,pt 148)
110505	New Military Facilities (SIC pt 15-17)
110506	New Conservation & Development Facilities (SIC pt 15-17)
110507	New Nonbuilding Facilities, nec (SIC pt 15-17)
110508	New Access Structures for Solid Mineral Development (SIC pt 108,pt 1112,pt 1213,pt 148)
120100	Maint. & Repair, Residential (SIC pt 15,pt 17)

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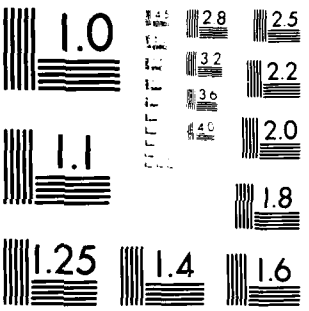

Code	Industry
120201	Maint. & Repair, Nonfarm Buildings, nec (SIC pt 15,pt 17)
120202	Maint. & Repair, Farm Residential (SIC pt 15,pt 17)
120203	Maint. & Repair, Farm Service Facilities (SIC pt 15,pt 17)
120204	Maint. & Repair, Telephone & Telegraph Facilities (SIC pt 16,pt 17)
120205	Maint. & Repair, Railroads (SIC pt 16,pt 17)
120206	Maint. & Repair, Electric Utility Facilities (SIC pt 16,pt 17)
120207	Maint. & Repair, Gas Utility Facilities (SIC pt 16,pt 17)
120208	Maint. & Repair, Petroleum Pipelines (SIC pt 16,pt 17)
120209	Maint. & Repair, Water Supply Facilities (SIC pt 16,pt 17)
120210	Maint. & Repair, Sewer Facilities (SIC pt 16,pt 17)
120211	Maint. & Repair, Local Transit Facilities (SIC pt 16,pt 17)
120212	Maint. & Repair, Military Facilities (SIC pt 15-17)
120213	Maint. & Repair, Conservation & Development Facilities (SIC pt 15-17)
120214	Maint. & Repair, Highways & Streets (SIC pt 16,pt 17)
120215	Maintenance & Repair of Petroleum & Natural Gas Wells (SIC pt 138)
120216	Maint. & Repair, Nonbuilding Facilities, nec SIC pt 15-17)
129999	Other Construction (SIC 15-17)
130100	Complete Guided Missiles (SIC 3761)
130200	Ammunition, except Small Arms (SIC 3483)
130300	Tank & Tank Components (SIC 3795)
130500	Small Arms (SIC 3484)
130600	Small Arms Ammunition (SIC 3482)
130700	Other Ordnance & Accessories (SIC 3489)
140101	Meat Packing Plants (SIC 2011)
140102	Sausages & Other Prepared Meats (SIC 2013)
140103	Poultry Dressing Plants (SIC 2016)
140104	Poultry & Egg Processing (SIC 2017)
140200	Creamery Butter (SIC 2021)
140300	Natural & Processed Cheese (SIC 2022)
140400	Condensed & Evaporated Milk (SIC 2023)
140500	Ice Cream & Frozen Desserts (SIC 2024)
140600	Fluid Milk (SIC 2026)
140700	Canned & Cured Sea Foods (SIC 2091)
140800	Canned Specialties (SIC 2032)
140900	Canned Fruits & Vegetables (SIC 2033)
140100	Dehydrated Food Products (SIC 2034)
141100	Pickles, Sauces & Salad Dressings (SIC 2035)
141200	Fresh & Frozen Packaged Fish (SIC 2092)
141300	Frozen Fruits & Vegetables (SIC 2037-8)
141401	Flour & Other Grain Mills (SIC 2041)
141402	Cereal Preparations (SIC 2043)
141403	Blended & Prepared Flour (SIC 2045)
141501	Dog, Cat & Other Pet Food (SIC 2047)
141502	Prepared Feeds, nec (SIC 2048)
141600	Rice Milling (SIC 2044)
141700	Wet Corn Milling (SIC 2046)
141801	Bread, Cake & Related Products (SIC 2051)
141802	Cookies & Crackers (SIC 2052)
141900	Sugar (SIC 2061-3)
142001	Confectionery Products (SIC 2065)
142002	Chocolate & Cocoa Products (SIC 2066)
142003	Chewing Gum (SIC 2067)

Code	Industry
142101	Malt Liquors (SIC 2082)
142102	Malt (SIC 2083)
142103	Wines, Brandy & Brandy Spirits (SIC 2084)
142104	Distilled Liquor, except Brandy (SIC 2085)
142200	Bottled & Canned Soft Drinks (SIC 2086)
142300	Flavoring Extracts & Syrups, nec (SIC 2087)
142400	Cottonseed Oil Mills (SIC 2074)
142500	Soybean Oil Mills (SIC 2075)
142600	Vegetable Oil Mills, nec (SIC 2076)
142700	Animal & Marine Fats & Oils (SIC 2077)
142800	Roasted Coffee (SIC 2095)
142900	Shortening & Cooking Oils (SIC 2079)
143000	Manufactured Ice (SIC 2097)
143100	Macaroni & Spaghetti (SIC 2098)
143200	Food & Preparations, nec (SIC 2099)
150101	Cigarettes (SIC 211)
150102	Cigars (SIC 212)
150103	Chewing & Smoking Tobacco (SIC 213)
150200	Tobacco Stemming & Redrying (SIC 214)
160100	Broadwoven Fabric Mills & Fabric Finishing (SIC 221-3,2261-2)
160200	Narrow Fabric Mills (SIC 224)
160300	Yarn Mills & Textile Finishing, nec (SIC 2269,2281-3)
160400	Tread Mills (SIC 2284)
170100	Floor Coverings (SIC 227)
170200	Felt Goods, nec (SIC 2291)
170300	Lace Goods (SIC 2292)
170400	Padding & Upholstery Filling (SIC 2293)
170500	Processing Textile Wastes (SIC 2294)
170600	Coated Fabrics, not Rubberized (SIC 2295)
170700	Tire Cord & Fabric (SIC 2296)
170900	Cordage & Twine (SIC 2298)
171001	Nonwoven Fabrics (SIC 2297)
171002	Textile Goods, nec (SIC 2299)
180101	Women's Hosiery, except Socks (SIC 2251)
180102	Hosiery, nec (SIC 2252)
180201	Knit Outerwear Mills (SIC 2253)
180202	Knit Underwear Mills (SIC 2254)
180203	Knitting Mills, nec (SIC 2259)
180300	Knit Fabric Mills (SIC 2257-8)
180400	Apparel Made From Purchased Material (SIC 231-8,39996)
190100	Curtains & Draperies (SIC 2391)
190200	Housefurnishings, nec (SIC 2392)
190301	Textile Bags (SIC 2393)
190302	Canvas Products (SIC 2394)
190303	Pleating & Stitching (SIC 2395)
190304	Automotive & Apparel Trimmings (SIC 2396)
190305	Schiffli Machine Embroideries (SIC 2397)
190306	Fabricated Textile Products, nec (SIC 2399)
200100	Logging Camps & Contractors (SIC 2411)
200200	Sawmills & Planing Mills, General (SIC 2421)
200300	Hardwood Dimension & Flooring Mills (SIC 2426)
200400	Special Product Sawmill, nec (SIC 2429)

Code	Industry
200501	Millwork (SIC 2431)
200502	Wood Kitchen Cabinets (SIC 2434)
200600	Veneer & Plywood (SIC 2435-6)
200701	Structural Wood Members, nec (SIC 2439)
200702	Prefabricated Wood Buildings (SIC 2452)
200800	Wood Preserving (SIC 2491)
200901	Wood Pallets & Skids (SIC 2448)
200902	Particleboard (SIC 2492)
200903	Wood Products, nec (SIC 2499)
210000	Wood Containers (SIC 2441,2449)
220101	Wood Household Furniture (SIC 2511)
220102	Household Furniture, nec (SIC 2519)
220103	Wood TV & Radio Cabinets (SIC 2517)
220200	Upholstered Household Furniture (SIC 2512)
220300	Metal Household Furniture (SIC 2514)
220400	Mattresses & Bedsprings (SIC 2515)
230100	Wood Office Furniture (SIC 2521)
230200	Metal Office Furniture (SIC 2522)
230300	Public Building Furniture (SIC 2531)
230400	Wood Partitions & Fixtures (SIC 2541)
230500	Metal Partitions & Fixtures (SIC 2542)
230600	Blinds, Shades & Drapery Hardware (SIC 2591)
230700	Furniture & Fixtures, nec (SIC 2599)
240100	Pulp Mills (SIC 261)
240200	Paper Mills, except Building Paper (SIC 262)
240300	Paperboard Mills (SIC 263)
240400	Envelopes (SIC 2642)
240500	Sanitary Paper Products (SIC 2647)
240602	Building Paper & Board Mills (SIC 266)
240701	Paper Coating & Glazing (SIC 2641)
240702	Bags, except Textile (SIC 2643)
240703	Die-Cut Paper & Board (SIC 2645)
240704	Pressed & Molded Pulp Goods (SIC 2646)
240705	Stationery Products (SIC 2648)
240706	Converted Paper Products, nec (SIC 2649)
250000	Paperboard Containers & Boxes (SIC 265)
260100	Newspapers (SIC 271)
260200	Periodicals (SIC 272)
260301	Book Publishing (SIC 2731)
260302	Book Printing (SIC 2731)
260400	Misc Publishing (SIC 274)
260501	Commercial Printing (SIC 2751-2,2754)
260502	Lithographic Platemaking & Services (SIC 2795)
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260602	Blankbooks & Looseleaf Binders (SIC 2782)
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270100	Industrial Inorganic & Organic Chemicals (SIC 281,2865,2899)

Code	Industry
270201	Nitrogenous & Phosphatic Fertilizers (SIC 2873-4)
270202	Fertilizers, Mixing Only (SIC 2875)
270300	Agricultural Chemicals, nec (SIC 2879)
270401	Gum & Wood Chemicals (SIC 2861)
270402	Adhesives & Sealants (SIC 2891)
270403	Explosives (SIC 2892)
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310100	Petroleum Refining & Misc Products of Petroleum & Coal (SIC 291,299)
310200	Paving Mixtures & Blocks (SIC 2951)
310300	Asphalt Felts & Coatings (SIC 2952)
320100	Tires & Inner Tubes (SIC 301)
320200	Rubber & Plastic Footwear (SIC 302)
320301	Reclaimed Rubber (SIC 303)
320302	Fabricated Rubber Products, nec (SIC 306)
320400	Misc Plastic Products (SIC 307)
320500	Rubber & Plastic Hose & Belting (SIC 304)
330001	Leather Tanning & Finishing (SIC 311)
340100	Footwear Cut Stock (SIC 313)
340201	Shoes, except Rubber (SIC 3143-3,3149)
340202	House Slippers (SIC 3142)
340301	Leather Gloves & Mittens (SIC 315)
340302	Luggage (SIC 316)
340303	Women's Handbags & Purses (SIC 3171)
340304	Personal Leather Goods (SIC 3172)
340305	Leather Goods, nec (SIC 319)
350100	Glass & Glass Products, except Containers (SIC 321,3229,323)
350200	Glass Containers (SIC 3221)
360100	Hydraulic Cement (SIC 324)
360200	Brick & Structural Clay Tile (SIC 3251)
360300	Ceramic Wall & Floor Tile (SIC 3252)
360400	Clay Refractories (SIC 3255)
360500	Structural Clay Products, nec (SIC 3259)
360600	Vitreous Plumbing Fixtures (SIC 3261)
360701	Vitreous China Food Utensils (SIC 3262)
360702	Fine Earthenware Food Utensils (SIC 3263)
360800	Porcelain Electrical Supplies (SIC 3264)
360900	Pottery Products, nec (SIC 3269)
361000	Concrete Block & Brick (SIC 3271)
361100	Concrete Products, nec (SIC 3272)

Code	Industry
361200	Ready-Mixed Concrete (SIC 3273)
361300	Lime (SIC 3274)
361400	Gypsum Products (SIC 3275)
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361600	Abrasive Products (SIC 3291)
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370104	Cold Finishing of Steel Shapes (SIC 3316)
370105	Steel Pipe & Tubes (SIC 3317)
370200	Iron & Steel Foundries (SIC 332)
370300	Iron & Steel Forgings (SIC 3462)
370401	Metal Heat Treating (SIC 3398)
370402	Primary Metal Products, nec (SIC 3399)
380100	Primary Copper (SIC 3331)
380200	Primary Lead (SIC 3332)
380300	Primary Zinc (SIC 3333)
380400	Primary Aluminum (SIC 3334,28195)
380500	Primary Nonferrous Metals, nec (SIC 3339)
380600	Secondary Nonferrous Metals (SIC 334)
380700	Copper Rolling & Drawing (SIC 3351)
380800	Aluminum Rolling & Drawing (SIC 3353-5)
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381000	Nonferrous Wire Drawing & Insulating (SIC 3357)
381100	Aluminum Casting (SIC 3361)
381200	Brass, Bronze & Copper Castings (SIC 3362)
381300	Nonferrous Castings, nec (SIC 3369)
381400	Nonferrous Forgings (SIC 3463)
390100	Metal Cans (SIC 3411)
390200	Metal Barrels, Drums & Pails (SIC 3412)
400100	Metal Sanitary Ware (SIC 3431)
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400300	Heating Equipment, except Electrical (SIC 3433)
400400	Fabricated Structural Metal (SIC 3441)
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400800	Architectural Metal Work (SIC 3446)
400901	Prefabricated Metal Buildings (SIC 3448)
400902	Misc Metal Work (SIC 3449)
410100	Screw Machine Products & Bolts, Nuts, Rivets, & Washers (SIC 345)
410201	Automotive Stampings (SIC 3465)
410202	Crowns & Closures (SIC 3466)
410203	Metal Stampings, nec (SIC 3469)
410100	Cutlery (SIC 3421)
420201	Hand & Edge Tools, nec (SIC 3432)

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420202	Hand Saws & Saw Blades (SIC 3425)
420300	Hardware, nec (SIC 3429)
420401	Plating & Polishing (SIC 3471)
420402	Metal Coating & Allied Services (SIC 3479)
420500	Misc Fabricated Wire Products (SIC 3495-6)
420700	Steel Springs, except Wire (SIC 3493)
420800	Pipe, Valves & Pipe Fittings (SIC 3494,3498)
421000	Metal Foil & Leaf (SIC 3497)
421100	Fabricated Metal Products, nec (SIC 3499)
430100	Steam Engines & Turbines (SIC 3511)
430200	Internal Combustion Engines, nec (SIC 3519)
440001	Farm Machinery & Equipment (SIC 3523)
440002	Lawn & Garden Equipment (SIC 3524)
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450200	Mining Machinery, except Oil Field (SIC 3532)
450300	Oil Field Machinery (SIC 3533)
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460300	Hoists, Cranes & Monorails (SIC 3536)
460400	Industrial Trucks & Trailers (SIC 3537)
470100	Metal Cutting Machine Tools (SIC 3541)
470200	Metal Forming Machine Tools (SIC 3542)
470300	Special Dies & Tools: Machine Tool Accessories (SIC 3544-5)
470401	Power Driven Hand Tools (SIC 3546)
470402	Rolling Mill Machinery (SIC 3547)
470403	Metalworking Machinery, nec (SIC 3549)
480100	Food Products Machinery (SIC 3551)
480200	Textile Machinery (SIC 3552)
480300	Woodworking Machinery (SIC 3553)
480400	Paper Industries Machinery (SIC 3554)
480500	Printing Trades Machinery (SIC 3555)
480600	Special Industry Machinery, nec (SIC 3559)
490100	Pumps & Compressors (SIC 3561,3563)
490200	Ball & Roller Bearings (SIC 3562)
490300	Blowers & Fans (SIC 3564)
490400	Industrial Patterns (SIC 3565)
490500	Power Transmission Equipment (SIC 3566,3568)
490600	Industrial Furnaces & Ovens (SIC 3567)
490700	General Machinery, nec (SIC 3569)
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500002	Machinery, except Electrical, nec (SIC 3599)
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510400	Office Machines, nec (SIC 3579)
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520200	Commercial Laundry Equipment (SIC 3582)
520300	Refrigeration & Heating Equipment (SIC 3585)
520400	Measuring & Dispensing Pumps (SIC 3586)
520500	Service Industry Machines, nec (SIC 3589)
530100	Instruments to Measure Electricity (SIC 3825)

Code	Industry
530200	Transformers (SIC 3612)
530300	Switchgear & Switchboard Apparatus (SIC 3613)
530400	Motors & Generators (SIC 3621)
530500	Industrial Controls (SIC 3622)
530600	Welding Apparatus, Electric (SIC 3623)
530700	Carbon & Graphite Products (SIC 3624)
530800	Electrical Industrial Apparatus, nec (SIC 3629)
540100	Household Cooking Equipment (SIC 3631)
540200	Household Refrigerators & Freezers (SIC 3632)
540300	Household Laundry Equipment (SIC 3633)
540400	Electric Housewares & Fans (SIC 3634)
540500	Household Vacuum Cleaners (SIC 3635)
540600	Sewing Machines (SIC 3636)
540700	Household Appliances, nec (SIC 3639)
550100	Electric Lamps (SIC 3641)
550200	Lighting Fixtures & Equipment (SIC 3645-8)
550300	Wiring Devices (SIC 3543-4)
560100	Radio & TV Receiving Sets (SIC 3651)
560200	Phongraph Records & Tapes (SIC 3652)
560300	Telephone & Telegraph Apparatus (SIC 3661)
560400	Radio & TV Communications Equipment (SIC 3662)
570100	Electron Tubes (SIC 3671-3)
570200	Semiconductors & Related Devices (SIC 3674)
570300	Electronic Components, nec (SIC 3675-9)
580100	Storage Batteries (SIC 3691)
580200	Dry & Wet Primary Batteries (SIC 3692)
580300	X-Ray Apparatus & Tubes (SIC 3693)
580400	Electrical Engine Equipment (SIC 3694)
580500	Electrical Equipment, nec (SIC 3699)
590100	Truck & Bus Bodies (SIC 3713)
590200	Truck Trailers (SIC 3715)
590301	Motor Vehicles (SIC 3711)
590302	Motor Vehicles Parts & Accessories (SIC 3714)
600100	Aircraft (SIC 3721)
600200	Aircraft & Missile Engines & Enginer Parts (SIC 3724,3764)
600400	Aircraft & Missile Equipment, nec (SIC 3728,3769)
610100	Ship Building & Repairing (SIC 3731)
610200	Boat Building & Repairing (SIC 3732)
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610500	Motorcycles, Bicycles & Parts (SIC 375)
610601	Travel Trailers & Campers (SIC 3792)
610602	Mobile Homes (SIC 2451)
610700	Transportation Equipment, nec (SIC 3799)
620100	Engineering & Scientific Instruments (SIC 3811)
620200	Mechanical Measuring Devices (SIC 3823-4,3829)
620300	Automatic Temperature Controls (SIC 3822)
620400	Surgical & Medical Instruments (SIC 3841)
620500	Surgical & Appliances & Supplies (SIC 3842)
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620700	Watches, Clocks & Parts (SIC 387)
630100	Optical Instruments & Lenses (SIC 383)
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Code	Industry
630300	Photographic Equipment & Supplies (SIC 386)
640101	Precious Metal Jewelry (SIC 3911)
640102	Jewelers Materials & Lapidary Work (SIC 3915)
640104	Silverware & Plated Ware (SIC 3914)
640105	Costume Jewelry (SIC 3961)
640200	Musical Instruments (SIC 393)
640301	Games, Toys & Children's Vehicles (SIC 3944)
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640501	Pens & Mechanical Pencils (SIC 3951)
640502	Lead Pencils & Art Goods (SIC 3952)
640503	Marking Devices (SIC 3953)
640504	Carbon Paper & Inked Ribbons (SIC 3955)
640600	Artificial Trees & Flowers (SIC 3962)
640701	Buttons (SIC 3963)
640702	Needles, Pins & Fasteners (SIC 3964)
640800	Brooms & Brushes (SIC 3991)
640900	Hard Surface Floor Coverings (SIC 3996)
641000	Burial Caskets & Vaults (SIC 3995)
641100	Signs & Advertising Displays (SIC 3993)
641200	Manufacturing Industries, nec (SIC 3999)
650100	Railroads & Related Services (SIC 40,474,pt 4789)
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650400	Water Transportation (SIC 44)
650500	Air Transportation (SIC 45)
650600	Pipe Lines, except Natural Gas (SIC 46)
650700	Transportation Services (SIC 47,excl 474 & pt 4789)
660000	Communications, except Radio & TV (SIC 481,482,484-9)
670000	Radio & TV Broadcasting (SIC 483)
680100	Electric Utilities (SIC 491,pt 493)
680200	Gas Utilities (SIC 492,pt 493)
680300	Water Supply & Sanitary Services (SIC 494-7,pt 493)
690100	Wholesale Trade (SIC 50,51)
690200	Retail Trade (SIC 52-7,59,7369,8042)
700100	Banking (SIC 60)
700200	Credit Agencies (SIC 61,excl pt 613,67)
700300	Security & Commodity Brokers (SIC 62)
700400	Insurance Carriers (SIC 63)
700500	Insurance Agents & Brokers (SIC 64)
710200	Real Estate (SIC 65-6,pt 1531)
720100	Hotels & Lodging Places (SIC 70,excl dining)
720200	Personal & Repair Services, nec (SIC 72, excl 723-4,762-4,pt 7699)
720300	Beauty & Barber Shops (SIC 723-4)
730100	Misc Business Services (SIC 732-9,excl 7369,7692,7694,pt 7699)
730200	Advertising (SIC 731)
730300	Misc Professional Services (SIC 81,89, excl 8922)
740000	Eating & Drinking Places (SIC 58,pt 70)
750000	Automobile Repair & Services (SIC 75)
760100	Motion Pictures (SIC 78)
760200	Amusement & Recreation Services (SIC 79)
770100	Doctors & Dentists (SIC 801-3,8041)

Code	Industry
770200	Hospitals (SIC 806)
770300	Other Medical & Health Services (SIC 074,8049,805,807-9)
770400	Educational Services (SIC 82)
770500	Nonprofit Organizations (SIC 84,86,8922)
770679	Social Services, nec (SIC 8321,8331,8351,8399,
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The Economic Impact Forecast System (EIFS) is a computer system which provides information useful for estimating the socioeconomic impacts caused by new military projects and activities. After the initial development of EIFS, the U.S. Army Construction Engineering Research Laboratory (CERL) encouraged leading economists and scientists to review the model and provide comments and suggestions for ways to improve it. These suggestions were then incorporated into an updated version of the system. In addition, interaction with users identified problems associated with the logistics of using a truly interactive

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computer system. Coupled with the need to provide for some systematic update or modification of EIFS (free of the need for frequent revision of the user manual), it became clear that a more general and logistically oriented user's manual was necessary. This report provides information for obtaining and initially interpreting output from current and future versions of EIFS. The information contained in this report supersedes information contained in CERL Technical Report N-2 and the 1979 edition of N-69. Many problems identified by users in interpreting Technical Report N-69 and DA Pamphlet 200-2 have been solved in this updated report.


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